

UNIVERSITY OF SCRANTON



**The Graduate School
1990/91 Catalog**

UNIVERSITY OF SCRANTON

THE GRADUATE SCHOOL 1990/1991 CATALOG

Where Potential
Becomes
Achievement
in the
Jesuit Tradition

August 1990

The Graduate School
University of Scranton
800 Linden Street
Scranton, Pennsylvania 18510-4632
Phone 717-941-7600
or 1-800-FON-GRAD

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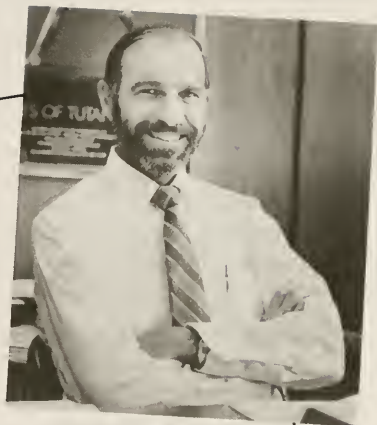
CORPORATE TITLE

"University of Scranton"
Scranton, Pennsylvania

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The Estate, located in the heart of the campus, is home for the Graduate School Office.



To the Prospective Graduate Student:

The University of Scranton is an outstanding institution of higher education which reflects in its graduate programs the commitment to both rigorous study and concern for individual students which have been the University's tradition.

Whether your goal be preparation for further advanced study, professional development and advancement, or simply to learn, I invite you to discuss with our faculty, staff, current students, and alumni the Graduate School's programs. I think you'll be impressed.

Thomas P. Hogan, Ph.D.
Dean of the Graduate School
& Director of Research

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Calendar

Fall '90 Term Schedule

Preferred registration	April 2-12
Orientation for new students	Sun., Aug. 26
Walk-in registration thru	Fri., Aug. 31
CLASSES START	Mon., Aug. 27
Late fee in effect after	Fri., Aug. 31
Last day to register for comps	Fri., Sept. 7
Last day to add a course	Fri., Sept. 7
Last day to apply for degree	Fri., Sept. 21
Comprehensive exams administered	Sat., Oct. 6
Term break (No classes)	Oct. 15-19
Last day to withdraw from course	Thurs., Nov. 8
Last day for theses, scholarly papers	Fri., Nov. 16
Thanksgiving (No class)	Nov. 21-22
FINAL EXAMS	Dec. 11-17

Interession '91 Term Schedule

Preferred registration	Oct. 22 - Nov. 2
Walk-in registration thru	Tues., Jan. 8
CLASSES START	Thurs., Jan. 3
Last day to add a course	Wed., Jan. 9
Last day to withdraw from course	Wed., Jan. 23
FINAL EXAMS	Jan. 30-31

Spring '91 Term Schedule

Preferred registration	Oct. 22 - Nov. 2
Orientation for new students	Sun., Feb. 3
Walk-in registration thru	Fri., Feb. 8
CLASSES START	Mon., Feb. 4
Late fee in effect after	Fri., Feb. 8
Last day to register for comps	Fri., Feb. 15
Last day to add a course	Fri., Feb. 15
Last day to apply for degree	Fri., Feb. 22
Comprehensive exams administered	Sat., Mar. 16
Term Break/Easter Holiday (No classes)	Mar. 29 - Apr. 7
Last day for theses, scholarly papers	Fri., Apr. 12
Last day to withdraw from course	Mon., Apr. 15
FINAL EXAMS	May 15-21
COMMENCEMENT	Sat., May 25

*Summer Sessions
Common Dates for Summer '91 Terms*

Preferred Registration	Mar. 18-28
Walk-in registration thru	First class day
Last day to register for comps	Fri., June 21
Last day to file for degree	Fri., June 28
Last day for theses, scholarly papers	Fri., July 12
Comprehensive exams administered	Sat., July 13

Summer I '91 Term Schedule

CLASSES START	Mon., June 3
Last day to add a course	Fri., June 7
Last day to withdraw from course	Fri., June 21
FINAL EXAMS	June 26-27

Summer G '91 Term Schedule

CLASSES START	Mon., June 17
Last day to add a course	Fri., June 21
Last day to withdraw from course	Wed., July 17
FINAL EXAMS	July 24-25

Summer II '91 Term Schedule

CLASSES START	Mon., July 8
Last day to add a course	Fri., July 12
Last day to withdraw from course	Fri., July 26
FINAL EXAMS	July 31 - Aug. 1



The staff of the Graduate Office. Standing, left to right: Mary Ann Kuzdro, Jim Goonan, Peggy Daggers, Regina Bennett. Seated, left to right: Dean Hogan, Arthur Bugh, Faye Cuchara, Margie Ezzo.

General Information

The University of Scranton, the oldest Catholic institution of higher education in Northeastern Pennsylvania, was founded in 1888 as Saint Thomas College. It is chartered under the laws of the Commonwealth of Pennsylvania and empowered to confer Bachelor's and Master's degrees in the Arts, Sciences, Business Administration and Education. In 1938 Saint Thomas College became the University of Scranton, while four years later the Society of Jesus acquired title from the Catholic Diocese of Scranton and administrative control from the Brothers of the Christian Schools. Thus Scranton became the twenty-fourth of the twenty-eight Jesuit colleges and universities in the United States.

Programs

Graduate study was initiated at the University of Scranton in 1950, the first master's degrees being awarded in 1952. At present, the following programs are offered by the Graduate School:

Business Administration	MBA
Biochemistry	MS,MA
Chemistry	MS,MA
Clinical Chemistry	MS,MA
English	MA
History	MA
Health Administration	MS
Human Resources Administration	MS
Community Counseling	MS
Rehabilitation Counseling	MS
Software Engineering	MS
Elementary School Administration	MS
Secondary School Administration	MS
Elementary Education	MS
School Counseling	MS
Reading	MS
Secondary Education	MS,MA

The University has certification programs approved by the Pennsylvania Department of Education in the areas listed below. Some of these may be pursued in connection with an undergraduate degree, some in connection with a graduate degree, and some may be pursued independent of any degree program.

Certification Programs

Biology	Latin
Chemistry	Mathematics
Communication	Physics
Elementary Education	Reading Specialist
Elementary Principal	Secondary Principal
English	Secondary School Guidance
French	Social Studies
General Science	Spanish
German	

Supervisor certificates in:

Biology	Physics
Chemistry	Reading
Communication	Science
English	School Guidance
Foreign Language	Social Studies
Mathematics	

Objectives

As one of the family of world wide Jesuit Colleges and Universities, the University of Scranton shares with them a common educational heritage and tradition. Its principal objective, therefore, is to lead the student to understand and to inspire him/her to fulfill that complex of dignities and responsibilities which man or woman, as a person and as a member of human society, is under God.

The specific mission of the Graduate School is to provide advanced, post-baccalaureate education through high quality programs which are coordinated with the University's other programs. The Graduate School subscribes to the Policy Statement on The Master's Degree of the Council of Graduate Schools regarding the nature, requirements and evaluation of master's level work.

Organization and Location

The administration and supervision of the Graduate School is the responsibility of the Dean of the Graduate School. The Dean is assisted by a Graduate Dean's Conference, an advisory committee, of which the Dean is chair. All questions concerning admission, candidacy and comprehensive examinations or modifications of course programs, must be submitted in writing to the Dean of the Graduate School. Decisions of the Dean of the Graduate School are final.

Requests for admission, transcripts, letters to interested parties, and data concerning academic records should be made to the Graduate Office, University of Scranton.

The office of the Dean of the Graduate School is on the 2nd Floor of The Estate, located in the center of the campus (see map inside back cover). The office is open daily from 8:30 a.m. to 4:30 p.m. Monday through Friday. During Fall and Spring terms it is also open Monday through Thursday evenings. For students who wish to consult the Dean the courtesy of calling for an appointment is recommended.

The Graduate School is in session during the Fall and Spring semesters, the (January) Intersession, and for three Summer sessions. The calendars for each of the sessions are listed in the first part of this Catalog.

Time schedules for each course appear in the special bulletins published four times each year for Fall, Intersession, Spring, and Summer sessions. Copies of these bulletins may be obtained in the Graduate Office.

Graduate Dean's Conference: 1989-90

Dr. Thomas P. Hogan	<i>Chair, Dean of the Graduate School</i>
Dr. Raymond W. Champagne, Jr.	<i>Professor of History</i>
Dr. James J. Cunningham	<i>Associate Professor of Education and Chair, Department of Education</i>
Dr. Joseph R. Zandarski	<i>Professor of Business Administration</i>
Dr. Joseph H. Dreisbach	<i>Professor of Chemistry</i>
Rev. John J. Levko, S.J.	<i>Professor of Mathematics and Director, Eastern Christian Studies</i>
Dr. Raymond L. Kimble	<i>Associate Professor of Education</i>
Dr. Eugene A. McGinnis	<i>Professor of Physics</i>
Dr. Francis X. Jordan	<i>Associate Professor of English and Chair of Department</i>
Dr. John K. Stout	<i>Professor of Human Resources and Chair, Department of Human Resources</i>
Mr. James L. Goonan	<i>Assistant to the Dean</i>
Ms. Molly M. Gowell	<i>Student</i>
Mr. David Lowry	<i>Student</i>
Mr. Alex Mendes	<i>Student</i>

Admission and Registration

Application Process

Students must be formally admitted to the Graduate School in order to register for any graduate courses. The Application for Admission form may be obtained from the Graduate Office. Completed applications, together with official transcripts of undergraduate and graduate work taken elsewhere, letters of recommendation, any required test scores, and other supporting documents, should be in the Graduate Office at least one month before the term in which the student wishes to begin graduate study. International students should have all materials in the Graduate Office at least three months in advance.

Students wishing to pursue the MBA program are permitted to take undergraduate *foundation* courses for one term while the application is under review, provided an application form has been submitted to the Graduate Office.

Admission Standards

The admission standards and policies of the University of Scranton are free of any limitation, specification or discrimination on the grounds of race, religion, color, national or ethnic origin, sex, age, or handicap, except as provided by law.

An applicant for admission to the Graduate School must possess a baccalaureate degree from an American college or university accredited by one of the recognized regional accrediting associations, or the equivalent from an international college or university. The ordinary standard for admission to a graduate program is an undergraduate QPI of at least 2.75 (on a 4.0 scale). Students falling below this level may submit other evidence of their ability to successfully complete a graduate program, such as grades in other postbaccalaureate courses, scores from examinations, or a record of progressively higher work responsibilities. In addition, the applicant's previous course work must show the successful completion of all prerequisites for graduate work in the program to which application has been made. Individual departments/programs may establish higher QPI requirements and/or introduce additional criteria for making the admissions decision. Consult the sections of this catalog devoted to the specific programs for such other criteria. Final action on an application for admission to the Graduate School is taken by the Graduate Dean.

Ordinarily, the applicant must submit the following to be considered for admission to the Graduate School:

- The completed graduate application, along with the non-refundable application fee.

— Official transcripts of all previous undergraduate and graduate work completed at accredited institutions (“student” copies of transcripts are not acceptable)

— Three references from persons capable of evaluating the student’s educational background and work or personal character

— Any additional material required by a particular department or program, e.g., test scores, personal interview, etc.

— International students must submit scores from TOEFL and an affidavit of financial support

Applicants may be admitted to the Graduate School in one of the following categories:

Regular Admission. Applicants are admitted under this category when they have satisfied the admissions criteria of both the Graduate School and the department or program in which they are to enroll for graduate studies.

Probationary Admission. Applicants who do not meet all of the criteria for Regular Admission, but show reasonable promise for success in graduate studies, may be accepted on a probationary basis. Students accepted on probation must consult their mentors to determine specific courses to be taken. The student may not register for more than six credits in a semester while on probationary acceptance. Students who obtain a cumulative QPI of at least 3.0 after completing nine credits are removed from probation and continue as regularly accepted students. Students who do not obtain a cumulative QPI of at least 3.0 after completing nine credits of coursework are subject to dismissal.

Provisional Admission. Applicants are admitted to the Graduate School under this category when their credentials are either incomplete at the time of application or when there is evidence of a deficiency in their academic preparation for studies in their chosen graduate program. Incomplete credentials may result because the application was submitted prior to the conferring of the baccalaureate degree, essential undergraduate grades are not yet available, or advanced test scores have not yet been reported, et cetera. An academic deficiency in preparatory studies would be determined by the requirements of the separate department or program in which the applicant seeks admission.

Special Admission. Applicants who are admitted to the Graduate School under this category are non-degree students. They are admitted to pursue studies for certification, transfer of credit, self-improvement, master’s equivalency, or auditing. The continuance of graduate studies under this category is governed by the grade policy of the Graduate School. A qualified undergraduate student who has been admitted to an accelerated course of study that permits him or her to earn graduate credit is accepted into the Graduate School as a special student under this category. Acceptance as a degree student is

contingent upon the reception of the baccalaureate degree in addition to the successful fulfillment of all other requirements for admission.

Second Degrees or Programs

Students who wish to take additional courses or pursue a new program within the same degree area as their first program and do so *within two years* of completing their first program need only advise the Graduate School Office and will be permitted to register for class.

Students who wish to start a new program within the same degree area as their first program and do so *between 2-5 years* of completing their first program must submit a new application with fee. Supporting materials will be pulled from the Graduate Office files.

Students who wish to start a new program in a *different* degree area from that of their first program and do so *within five years* of completing their first program, must submit a new application with fee and letters of reference. All other supporting materials will be pulled from the Graduate Office files.

Students wishing to begin *any* new programs *after five years* must submit a new application, fee, and all supporting materials.

Retention of Application Files

Applications for admission will be kept for *two years* from the original date of receipt. If the application has not been completed during this period, it will be destroyed.

Applications for admission which are completed and have been acted upon will be kept for *two years* from the date of acceptance. If a student does not register for class during this period, the application will be destroyed.

Prior to an application file being destroyed, the applicant will be notified by mail. If the applicant subsequently decides to enter a graduate program at the University, he/she will be required to reassemble the entire application file.

International Students

Applicants who are citizens of non-English speaking countries are required to obtain a score of at least 500 on the Test of English as a Foreign Language (TOEFL) as one criterion for admission to the Graduate School. Certain degree programs, as described in the sections on those programs in this catalog, require TOEFL scores higher than 500. International students are also required to submit a Certification of Finances form. All application materials for international students should be available for review in the Graduate Office a minimum of three months before the term in which the student wishes to begin study.

Ordinarily, international students are limited to six credits of work in their initial semester at the University and are required to participate in an English tutorial; there is no fee for this tutorial.



Mr. Arthur Bugh, Director of International Student Affairs.

Registration For Courses

Registration for each semester will take place according to the schedules listed in the special bulletins which are issued prior to each semester. Mail registration is permitted after the initial acceptance and registration. Registration will be with the approval of a student's mentor or chairman of the department. *Students who wish to cancel their registration must give written notice to the Graduate School Office. Please see details under Dropping and Withdrawing from a Course.*

In order to facilitate registration for both continuing and new students, a period of PREFERRED REGISTRATION is held in advance of each term. This extends over a period of about two weeks. All continuing students are expected to register for the subsequent term during the Preferred Registration period.

The University reserves the right to withdraw a course from its schedule in which less than ten students have been registered.

Undergraduate students may register for certain graduate courses. They must, however, have the approval of the appropriate department chair and the appropriate deans.

Orientations for New Graduate Students

Orientations for new graduate students, covering Graduate School policies and procedures, library and computer facilities, etc., are scheduled as listed below. Students beginning in Summer '90 or Fall '90 are expected to attend the Fall Orientation; students beginning in Intersession '91 or Spring '91 are expected to attend the Spring Orientation.

FALL ORIENTATION: Sunday, August 26, 1990, 12-5 PM
Lecture Hall 102, Hyland Hall

SPRING ORIENTATION: Sunday, February 3, 1991, 12-5 PM
Lecture Hall 102, Hyland Hall

Academic Regulations

Mentors

From the inception of graduate study, students will be assigned a mentor to help them formulate a program of studies and supervise their work. It is suggested that students work closely with their mentors and that the courtesy of arranging appointments in advance with faculty members so designated be observed by all students.

Grading

Achievement of graduate students is recorded as follows:

A: excellent (4 quality points for each semester hour of credit);
B+: superior (3.5 quality points for each semester hour of credit);
B: good (3 quality points for each semester hour of credit); C: fair but passing (2 quality points for each semester hour of credit); F: failure (0 quality points for each semester hour of credit).

Other grade symbols used are:

“S” indicates pass. Individual departments are authorized the use of S (pass) or U (fail) under certain circumstances. Students in the Department of Chemistry, Education and Human Resources should consult their Department Chair and/or mentor for details.

“IP” indicates a student is registered for a thesis or an approved research project which has not been completed at the end of a given semester but for which satisfactory progress is being made. This grade is temporary and once the work has been completed it must be converted to one of the permanent grade symbols.

“W” indicates that a student has withdrawn from a course.

“I” indicates postponement of the completion of a course. It is given at the discretion of the instructor to a student who is doing satisfactory work but who has not completed all of the course requirements at the end of a given semester. Given such an extension, the student must complete all the required work, unless otherwise agreed, before the midpoint of the next regular semester. Failure to complete the necessary work within the stipulated time results in automatic conversion of the “Incomplete” to the permanent grade of F.

“Audit” indicates that a student has taken a course for which permission has been granted without a grade being awarded. Students must secure such authorization prior to the start of a course.

The symbol “NG” is a temporary grade citation issued by the Dean on grade reports when a faculty member fails to meet the announced deadline for the submission of student final grade reports. Such temporary grade citations will be changed, in due course, to permanent grade symbols when issued by the professor(s) charged with that responsibility.

Regular attendance at class is considered a requisite for successful completion of a course.

Standards of Progress

All students must have a cumulative QPI of at least 3.0 to graduate with a master's degree. In addition, all students must maintain a cumulative QPI of at least 3.0 to remain in good academic standing. If a student's cumulative QPI drops below 3.0, he/she is placed on academic probation. If satisfactory progress is not made toward removing probationary status, the student is subject to dismissal by the Dean in consultation with the student's program director. If the student's cumulative QPI has increased to at least 3.0, the student is removed from academic probation.

Time Limit

All graduate work for a degree, including the thesis, must be completed within six consecutive years. Time spent in the armed forces is not included in the six year period. Extension of this time restriction may be granted for valid reasons at the discretion of the Dean.

Transfer Of Credits

Transfer of credits to graduate programs at the University of Scranton is governed by the following policies:

1. That such credits were acquired in residence at the other institution. Extension credits are, ordinarily, not acceptable.
2. That only six (6) credits maximum be transferred.
3. That courses to be transferred parallel courses here and mesh with the student's program at the University of Scranton.
4. That these credits were taken within six (6) years of the student's admission.
5. That a grade of B or better was acquired in these courses and that an official transcript is submitted for work at other institutions, including the course description of the credits in question.

Students matriculated at the University of Scranton may follow courses at other approved graduate schools, and transfer credits only with the previous permission of their mentor and the Dean of the Graduate School.

Comprehensive Examinations

Students in Master of Arts and Master of Science programs must pass a comprehensive examination in their respective fields of study. The examination may be oral, written, or both. Comprehensive examinations are given on dates published in the academic calendar in this catalog (see pages 6-7). Students must apply to take the

comprehensive exam by the deadlines given in the academic calendar, using the Application for Comprehensive Examination form available in the Graduate Office. Eligibility for the examination is determined by the Director of the student's program. Students should consult their mentors regarding the nature of the examination in their field. Students failing the comprehensive examination twice will not be considered for the master's degree.

Thesis

Candidates for the Master of Arts degree in programs in the Departments of Chemistry and Education are required to complete a thesis. Students in English and History, as well as students in Software Engineering may opt to do a thesis. A thesis is completed under the active supervision of the candidate's mentor and approved by one additional reader. In case of doubt, a third reader may be required. In the preparation of the thesis, style regulations prescribed by the Graduate School will be observed. Three copies of the accepted thesis must be submitted to the Graduate School Office on or before the date indicated in the University calendar.

Dropping, Withdrawing From or Adding A Course

Students are alerted that they may drop a course during the time in which they are entitled to a refund of any amount. (See "Refund Schedule", P. 24). TO DROP A COURSE STUDENTS MUST COMPLETE A "SCHEDULE CHANGE" FORM, WHICH IS AVAILABLE IN THE GRADUATE OFFICE. THIS FORM MUST BE COMPLETED AND RETURNED TO THE GRADUATE OFFICE WITHIN THE TIME IN WHICH STUDENTS ARE ENTITLED TO A REFUND. The drop will be treated as if the student never registered for the course.

After the time in which a student is entitled to a refund has elapsed, students will be permitted to withdraw from a course.

TO WITHDRAW FROM A COURSE STUDENTS MUST COMPLETE A "SCHEDULE CHANGE" FORM AND RETURN IT TO THE GRADUATE OFFICE. The student's transcript will contain the course number and title, along with a "W" for "withdraw".

See the academic calendar for deadlines for withdrawing.

Note: There is a special fee for any course-related schedule change submitted after the first week of each term.

Academic Integrity and Student Conduct

For policies regarding academic integrity (including matters of plagiarism, cheating, and other types of academic dishonesty) and the University of Scranton judicial system (related to student conduct), the student is referred to the University's *Policy Handbook* which, by this reference, is made a part of the Graduate School catalog.

Summary

The following procedures are to be followed by students working for the advanced degree:

- 1) File an application for admission to graduate study, official transcripts of undergraduate preparation and of graduate credits taken elsewhere, supporting recommendations, and test scores (if required).
- 2) Meet with their mentor to organize a program of studies.
- 3) Complete core, specific major and elective courses.
- 4) Complete the required thesis or scholarly paper, if applicable.
- 5) Successfully pass the required comprehensive examination.
- 6) Make formal application to the Graduate Office for the degree.

Special Notes For Students

1. Students, please note carefully that it is your responsibility to be familiar with the academic regulations, fee structures, and other policies contained in this catalog.
2. The University reserves the right to change its policies, schedules, and program requirements at any time when such action is deemed in the best interests of the University. There are established procedures for making such changes, procedures which protect the institution's integrity and the individual student's interest and welfare.
3. Application of policies, including change in policies, may be appealed to the Dean of the Graduate School.
4. When the actions of a student are judged by competent authority, using established procedure, to be detrimental to the interests of the University community, that person may be dismissed from the University.

List of Commonly Used Forms

This is a handy reference list of forms commonly used by graduate students. Certain less commonly used forms are not included here. The commonly used forms are readily available in the Graduate Office as well as in most department offices and from mentors.

APPLICATION FOR ADMISSION: Use this form to apply for admission to the Graduate School.

GRADUATE REGISTRATION: Use this form to register for courses, either through Preferred Registration or Walk-in Registration.

SCHEDULE CHANGE: Use this form to change a Registration form already submitted, e.g., to withdraw from, drop or add a course.

READER: Use this form, along with the Registration form, to register for a Reader course.

GRADUATE CREDIT TRANSFER RECOMMENDATION: Use this form to request review of graduate credits taken elsewhere for transfer to your program here.

APPLICATION FOR COMPREHENSIVE EXAMINATION: Use this form when you are ready to take comprehensives. *

APPLICATION FOR DEGREE: Submit this form in the term when you expect to complete all degree requirements. *

REQUEST FOR TRANSCRIPT: Use this form to request an official copy of your graduate transcript.

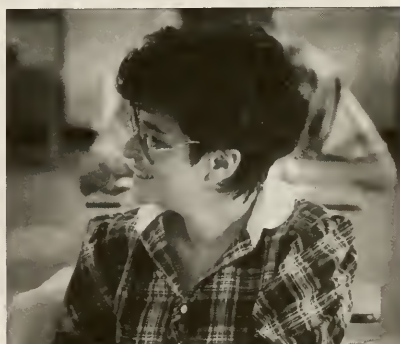
PROGRAM CHANGE: Use this form if you have already been admitted to one program but wish to be admitted to another; this includes changes between MA and MS programs within the same department.

EMPLOYER REIMBURSEMENT FORM: Use this form if you are under an employer reimbursement plan for tuition benefits. Completed form must be returned to Treasurer's Office each term with your registration agreement.

APPLICATION FOR GRADUATE

ASSISTANTSHIP: Complete and submit this form to the Graduate Office if you wish to be considered for a graduate assistantship in any department.

* See Calendar (pp. 6-7) for deadlines.



Resources

Alumni Memorial Library

Library holdings include approximately 225,000 volumes, 1,800 periodical subscriptions, 70,000 microforms. The Media Resources Center holds over 7,500 non-print items, including video cassettes, records, films, and filmstrips. Users may use terminals in the Library/Media Resources Center to access holdings or dial in via a modem (941-4777). ALEC, Alumni Library Electronic Catalog, displays holdings and availability of materials — in the library, in circulation, date due, overdue.

The Library hours are posted on campus, on ALEC, and on a recording (941-7525). It is open 93 hours per week, with extended hours during exam periods.

The University of Scranton belongs to a consortium of area colleges, NEPBC, that includes Marywood, King's, Wilkes, College Misericordia, Keystone Jr. College, and Luzerne County Community College. Students may borrow books directly from these libraries. A list of their periodical holdings is available at the Reference desk. Interlibrary loan is available for obtaining materials not owned by the Alumni Library. The fee is \$1.50 for photocopied articles; there is no charge for ILL books.

— *Computer Database Services.* The Library accesses bibliographic, directory, and statistical information via online databases: DIALOG, Dow Jones, OCLC, Wilsonline and VuText. Searches are conducted by appointment with libraries. The average search takes 10 minutes and usually costs from \$10-\$25 depending on the database accessed, number of citations printed, and length of connect time. Newsbank, ABI/Inform, Books-in-Print Plus Review, Corporate OneSource, Core Medline, ERIC, PsychLIT, Sociofile, and CINAHL databases are available in CD-ROM format. Users search CD-ROMs on their own without incurring fees.

— *Photocopying.* Four photocopiers are available. The Library uses a Vendacard system. Copies are 10 cents a page. The card is 50 cents. Micro copiers use dimes. A dollar changer is available.

— *Microforms.* In addition to back issues of some periodicals, the Library has telephone directories, college catalogs, ERIC documents, FBIS international coverage, historical documents, and Newsbank newspaper information in microformat.

— *Assistance* is available to Library users at the Circulation (941-7524) and Reference (941-4000) Desks. The Library conducts an extensive bibliographic instruction program to enable students to use material and staff resources as fully as possible.

Counseling And Career Services

The University's counseling and placement services are available to graduate students. The Counseling Center provides personal and career counseling and is located in the Gallery, 2F (Tel. 941-7620). The office hours are 8:30 a.m. to 8:30 p.m., Monday through Thursday, and 8:30 a.m. to 4:30 p.m. on Friday.

In addition, there is a Career Services Office to serve students anticipating further graduate work, and for assistance in securing employment placement. Office hours are 8:30 a.m. to 4:30 p.m. Monday through Friday, and at other times by appointment. Contact Career Services in the Gallery, 2R (Tel. 941-7640) to arrange appointments.

Assistantships, Financial Aid

Approximately 50 teaching fellowships, teaching assistantships, and research assistantships are available. For students in the rehabilitation counseling program, traineeships are also available. Information and application forms for the fellowships and assistantships may be obtained from the Graduate Office. Information and application forms for the rehabilitation counseling traineeships are available from the Director of the Rehabilitation Counseling Program.

Resident assistantships are offered to single male and female graduate students, whereby room and board in the university's dormitories are provided. Applications may be obtained from the Student Personnel Office. A limited number of campus jobs sponsored by the federally-funded work-study program are available. Inquiries regarding the work-study program should be directed to the Financial Aid Office.

Computer Facilities

The University provides an excellent array of computing facilities, both hardware and software. A simple listing of the facilities is provided below. Details regarding equipment, software, support services, and hours are published by University Computing Services (UCS) at the beginning of each academic year, with periodic updates throughout the year. Students should consult current UCS publications for up-to-date details.

IBM Mainframe — St. Thomas Hall, Room T107

VAX Minicomputer — St. Thomas Hall, Room T107

Microvax — St. Thomas Hall, Room T107

IBM PC Lab — St. Thomas Hall, Room T102

IBM PC Lab — Alumni Memorial Library, Basement

Computing Sciences IBM PC Lab — St. Thomas Hall, Room T162

CAD/CAM Lab — St. Thomas Hall, Room T170

Writing Center IBM PC Lab — St. Thomas Hall, Room T464

Psychology IBM PC Lab — O'Hara Hall, Room O205
SOM IBM PC Lab — O'Hara Hall, Room O508
SOM IBM PC Lab — O'Hara Hall, Room O506
IBM PC Lab — Redington Hall
PC Lab — Gavigan Hall
VAX Terminal Lab — St. Thomas Hall, Room T101
VAX Terminal Lab — St. Thomas Hall, Room T103
VAX Terminal Lab — O'Hara Hall, Room O519
Journalism Macintosh Lab — Jefferson Hall, Room J106
Helene Fuld Nursing Lab — O'Hara Hall, Room O106
Education Apple Lab — O'Hara Hall, Room O621
Learning Resources Center Lab — St. Thomas Hall, Room T575
Loyola Hall PC Lab — Loyola Hall, Room L115
IBM PS/2 Lab — St. Thomas Hall, Room T375
Graphics Lab — St. Thomas Hall, Room T385
ADA Lab — St. Thomas Hall, Room T475
Workstation Lab — St. Thomas Hall, Room T486

Learning Resources Center

The University's Learning Resources Center is located in St. Thomas Hall, Room T575. Services provided for the graduate student include workshops given by faculty, tutoring for undergraduate courses, assistance with study skills, as well as computer assisted learning, including an ESL software package for international students. Contact the Center, which is open Monday through Friday, (941-4038) for further information.

Research Centers

The University has a number of research centers which may be of interest to graduate students in selected areas of study. Among these are the following:

Center for Economic Education. The University's Center for Economic Education is sponsored by the Pennsylvania Council on Economic Education and is affiliated with the National Joint Council on Economic Education. The Center helps local schools to establish programs in economic education and maintains an extensive collection of materials on this subject. Director: Dr. Edward M. Scahill.

CAD/CAM Resource Center. The CAD/CAM Resource Center assists local businesses with the training and utilization of computer-aided design and computer-aided manufacturing. For the past several years the Center has had an active program supported by the Ben Franklin Partnership of the Commonwealth of Pennsylvania. Director: Dr. Joseph Connolly.

Joseph M. McDade Center for Technology and Applied Research. The Center has as its primary goal supporting the economic redevelopment of Northeastern Pennsylvania. The Center's programs

focus on promoting career technology preparedness, systematic manpower training and state-of-the-art research and development in applied computing and engineering. Director: Mr. Jerome DeSanto.

Small Business Development Center. The SBDC provides assistance to small businesses in a nine-county area of Northeastern Pennsylvania through expert consultation and training in the areas of finance, marketing, and management techniques. Director: Ms. Elaine Tweedy.

Physical Education/Recreation Complex

Graduate students may use the Long Center and Byron Recreation Complex on a per semester fee basis. Facilities are provided for indoor tennis and racquetball, basketball, swimming, weight room, sauna, etc.

Student Health Services

Graduate students may use the University Student Health Service, located in Nevils Hall (Tel. 941-7667) on a per semester fee basis. The service offers health and wellness information, nursing assessment, treatment of routine illnesses and injuries, medical services provided by physician and certified nurse practitioners by appointment, as well as referral to community health care providers for services beyond the scope of the Student Health Services.



Dr. Eugene McGinnis, Professor of Physics/Electronics Engineering, recipient of the 1990 award for outstanding contributions to the Graduate School by a faculty member, delivers the commencement address to the Graduate School's class of 1990.

Tuition and Fees

Tuition (per semester hour of credit)	\$258.00
MBA Tuition (per semester hour of credit)	\$270.00
Software Engineering (per semester hour of credit)	\$290.00

Fees —

Application Fee	35.00
Registration Fee (per semester):	
during Preferred Registration	25.00
after Preferred Registration	50.00
Parking Fee (per year)	30.00
Late Registration	20.00
Binding of Thesis	30.00
Graduation Fee	75.00
Recreation Center	
Fall or Spring Term	50.00
Summer or Intersession term	10.00
Reader Courses (per credit)	20.00
Transcripts	
Unofficial	1.00
Official: current students	2.00
Official: others	4.00
Schedule change fee (after 1st week of term)	15.00

Unless explicitly stated otherwise, tuition and fees are for one semester and are payable at registration. Tuition charges are made for all credits awarded. The graduation fee is payable, whether or not a student attends commencement exercises.

Students will not be permitted to receive any degree, certificate, or transcript of record until their financial accounts with the University have been satisfactorily settled.

The University will adhere rigidly to the following “Schedule of Refunds.” Fees are not refundable.

Schedule of Refunds

Fall/Spring Semesters

Before the first day of a class and up to and including

9 calendar days after a class begins	100%
To and including 16 calendar days after a class has begun	75%
To and including 23 calendar days after a class has begun	50%
To and including 30 calendar days after a class has begun	25%
Beyond 30 days after a class has begun	No Refund

Summer and Intersession

End of First Week	100%
End of Second Week	25%
Beyond Second Week	No Refund

Department of Education

Dr. Joseph A. Fusaro, Chair

Goals Of The Department Of Education

The Department of Education offers a variety of programs for individuals currently in the field of education as well as for those wishing to enter the field. The programs include initial certification for a variety of positions and additional certifications; master's degrees, some of which are directly connected with certifications and some of which may be pursued without any certifications; and individual courses which may be taken for updating skills and knowledge or pursuing new fields. The various programs and options are described in the following sections.

Departmental Requirements

Admission requirements for all programs in the Department of Education are the same as those for the Graduate School as a whole, as described on pages 11-13 of this catalog. All candidates for a master's degree in education are required to successfully complete a comprehensive examination in the field of their degree. Additional requirements for each degree or certification are described under the respective programs in the following sections.

Certification

All certification candidates must exhibit pre-certification competency of PL 94-142 before being recommended for the certification they seek.

A student who is enrolled in any certification program at the University and is recommended to be dropped from the program or refused University endorsement for certification may appeal the decision. The appeal is made through the Chair of the Department to a Committee consisting of three persons: the Graduate Dean, the Department Chair and a person from the faculty selected by the Director of the Certification Program in which the student is enrolled.

Approval of the mentor and certifying officer must be received before a course may be substituted for any course required in the specified certification program. Courses to be transferred from another college for certification purposes must also receive approval of the mentor and certifying officer before the courses are accepted for program requirements.

Accreditation

All graduate programs in the Department of Education are accredited by the Pennsylvania Department of Education (P.D.E.) and the National Council for Accreditation of Teacher Education (N.C.A.T.E.).

Secondary Education

Prof. Francis H. Curtis, Director

The Secondary Education program offers a number of options for students. The person who already holds a secondary certificate may choose a master's degree in secondary education with a *curriculum and instruction option*, *psychology option*, *content option*, or *general studies option*, the selection depending on the student's interests. The person who does not already possess a secondary education certificate may pursue certification independent of or in conjunction with a degree.

The *Foundation* course requirements (9 credits) are the *same* for all options and include the following courses:

<i>Foundation Courses</i> (9 credits)		Credits
Ed. 501	Educational Psychology	3
Ed. 502	Educational Research	3
Ed. 508	Advanced Foundations of Education	3

The various options have the following requirements in addition to the Foundation course requirements.

Curriculum and Instruction Option

Ed. 509	Improving Instruction	3
Ed. 510	Curriculum Theory and Development	3
Ed. 514	Group Processes in the Classroom	3
Ed. 545	Reading in the Content Areas	3
Ed. 560	Subject Methods	3
Ed. 562	Teaching the Gifted Child	3
Ed. 568	Education of the Exceptional Child	3
	Electives	6

Degree Requirements: Thirty-six (36) credits and a comprehensive examination are required for the Master of Science in Secondary Education with the Curriculum and Instruction Option.

Psychology Option

Ed. 514	Group Processes in the Classroom	3
Ed. 562	Teaching the Gifted Child	3
Ed. 568	Education of the Exceptional Child	3
COUN 508	Developmental Psychology	3
COUN 531	Psychology of Adjustment	3
	Electives	12

Degree Requirements: Thirty-six (36) credits and a comprehensive examination are required for the Master of Science in Secondary Education with the Psychology Option.

Content Option

Ed. 509	Improving Instruction	3
Ed. 560	Subject Methods	3
	(English concentration — Engl. 507)	
	Electives	0-3

The student and mentor will select fifteen (15) to eighteen (18) graduate credits in one of the content areas listed below:

History Chemistry English Mathematics

Degree Requirements: The Master of Science in Secondary Education with the Content Option is awarded with thirty-six (36) credits and the comprehensive examination.

General Studies Option

Electives	27
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Degree Requirements: Thirty-six (36) credits and a comprehensive examination are required for the Master of Science in Secondary Education with a General Studies Option. This option requires prior approval by the mentor in consultation with the Chair of the Education Department of a sequence of studies directed toward a professionally identified goal.

Teacher Certification Requirements: Completion of the following courses, if not previously transcribed or documented as being completed to the department's satisfaction, shall constitute the requirements for certification:

Ed. 501	Education Psychology	3
Ed. 508	Advanced Foundations of Education	3
Ed. 509	Improving Instruction	3
Ed. 513	Classroom Management	3
Ed. 545	Reading in the Content Areas	3
Ed. 511	Computer Literacy for Educators	3
Ed. 560	Subject Methods	3
Ed. 580	Teaching Internship	9
Ed. 592	Directed Study: Field Experience	3

Students working for certification can elect any of the options above if they choose to work toward a degree. The number of credits required for Ed. 580: Teaching Internship may be reduced below 9 credits based on years of previous teaching experience. *Note:* Additional credits may be required depending on the student's previous course work and how this relates to the area in which the student wishes to obtain certification.

In addition to these credits, the student must achieve satisfactory scores on the Tests required by Pennsylvania for certification. These tests may include:

- 1) Basic Skills;
- 2) General Knowledge;
- 3) Professional Knowledge;
- 4) The Specialization Area Test — mathematics, English, etc. as appropriate for the certificate sought by the candidate.

Additional Certifications and Self-Improvement

Students who already possess secondary teaching certification may pursue additional certifications. Courses required for the additional certifications will depend on the area(s) in which certification is sought and on previous course work. The student should consult the Director of the Secondary Education program regarding specific requirements.

Students may also take graduate courses for self-improvement, without reference to either a degree program or a certification program.



*Dr. Joseph Fusaro,
Chair, Department of Education &
Acting Dean, College of Health,
Education and Human Resources*



*Dr. Michael Marino,
Professor of Education*

Elementary Education

Dr. Raymond L. Kimble, Director

The Elementary Education program offers a number of options for students. The person who already holds an elementary education certificate may choose a master's degree in elementary education with a *curriculum and instruction option*, a *psychology option*, or a *general studies option*, the selection depending on the student's interests. The person who does not already possess an elementary education certificate may pursue the certification independent of or in conjunction with a degree

The *Foundation* course requirements (9 credits) are the *same* for all options and include the following courses:

<i>Foundation Courses</i> (9 credits)		Credits
Ed. 501	Educational Psychology	3
Ed. 502	Educational Research	3
Ed. 508	Advanced Foundations of Education	3

The various options have the following requirements in addition to the Foundation course requirements.

Curriculum and Instruction Option

Ed. 509	Improving Instruction	3
Ed. 510	Curriculum Theory and Development	3
Ed. 564	Teaching Elementary Language Arts	3
Ed. 567	Teaching Elementary Social Studies	3
Ed. 571	Teaching Elementary Mathematics	3
Ed. 574	Teaching Elementary Science	3
	Electives	9

Degree Requirements: Thirty-six (36) credits and a comprehensive examination are required for the Master of Science in Elementary Education with the Curriculum and Instruction Option.

Psychology Option

Ed. 514	Group Processes in the Classroom	3
Ed. 562	Teaching the Gifted Child	3
Ed. 568	Education of the Exceptional Child	3
COUN 508	Developmental Psychology	3
COUN 531	Psychology of Adjustment	3
	Electives	12

Degree Requirements: Thirty-six (36) credits and a comprehensive examination are required for the Master of Science in Elementary Education with the Psychology Option.

Degree Requirements: Thirty-six (36) credits and a comprehensive examination are required for the Master of Science in Elementary Education with the General Studies Option. This option requires prior approval by the mentor in consultation with the Chair of the Education Department of a sequence of studies directed toward a professionally identified goal.

Teacher Certification Requirements: Completion of the following courses, if not previously transcribed or documented as being completed to the department's satisfaction, shall constitute the requirements for certification:

Ed. 501	Educational Psychology	3
Ed. 503	Educational Tests and Measurement	3
Ed. 508	Advanced Foundations of Education	3
Ed. 513	Classroom Management	3
Ed. 541	Foundations of Reading	3
Ed. 545	Reading in the Content Areas	3
Ed. 511	Computer Literacy for Educators	3
Ed. 564	Teaching Elementary Language Arts	3
Ed. 567	Teaching Elementary Social Studies	3
Ed. 568	Education of the Exceptional Child	3
Ed. 571	Teaching Elementary Mathematics	3
Ed. 574	Teaching Elementary Science	3
Ed. 580	Teaching Internship	3-9
Ed. 592	Directed Study: Field Experience	3
Total Credits		42-48

Students working for certification can elect any of the options above if they choose to work toward a degree. The number of credits required for Ed. 580: Teaching Internship may be reduced below 9 credits based on years of previous teaching experience.

In addition to these credits, the student must achieve satisfactory scores on the National Teacher Examination. These tests include:

- 1) Basic Skills;
- 2) General Knowledge I — social studies, literature/fine arts, science;
- 3) Professional Knowledge;
- 4) The Specialization Area Test — Education in the Elementary School.

Administration (Elementary and Secondary)

Dr. Thomas W. Gerrity, Director

Objectives

The preparation of elementary and secondary school principals.

Admission Requirements

These requirements for admission to the Administration program are in addition to the requirements of the Graduate School.

1. Recommendations from three persons capable of evaluating the candidate's personal qualities as well as academic potential.
2. A written self-estimate of the candidate's qualifications for the position of principal.
3. A personal interview.

The Master's Degree

The student will be recommended for a Master of Science degree in *either* Elementary School Administration or Secondary School Administration after satisfactory completion of required courses, as approved by the mentor, passed a comprehensive examination in School Administration, and filed an approved scholarly paper or a professional project sixty days before graduation. With the mentor's permission, the student may substitute a prescribed three-credit course for the scholarly paper or professional project.

Normally thirty-six (36) credits are required for the Master of Science degree, and forty-eight (48) credits for certification as an Elementary School Principal or a Secondary School Principal.

Courses are prescribed from the following list; other courses, including electives, may be substituted in consultation with the mentor.



<i>Course</i>	<i>Administrative Sequence:</i>	<i>Credits</i>
*Ed. 521	Educational Administration	3
*Ed. 522	Problems in School Administration and Supervision	3-6
Ed. 523	Public Relations for Educators	3
Ed. 524	Personnel Management for Educators	3
**Ed. 525	School Finance	3
Ed. 526	School Plant Management	3
Ed. 527	School and Community Relations	3
***Ed. 528	Practicum in School Administration	3-6
**Ed. 529	School Law	3
Ed. 530	Seminar in Advanced School Law	3
Ed. 531	Educational Management	3
*Ed. 532	The Elementary School Principal as Administrator	3
*Ed. 533	The Secondary School Principal as Administrator	3
Ed. 534	Administration & Organization of the Middle School	3
*Ed. 535	Principles and Practices of Supervision	3
Ed. 536	Practicum in Supervision	3
<i>Curriculum and Instruction Sequence:</i>		
Ed. 509	Improving Instruction	3
*Ed. 510	Curriculum Theory and Development	3
Ed. 541	Foundations of Reading	3
Ed. 545	Reading in the Content Areas	3
<i>Psychological and Behavioral Sequence (any one)*:</i>		
COUN 503	Group Counseling and Dynamics	3
COUN 508	Developmental Psychology	3
COUN 531	Psychology of Adjustment	3
COUN 567	Health and Behavior	3
<i>Philosophical and Sociological Sequence*:</i>		
Ed. 508	Advanced Foundations of Education	3
<i>Research Sequence*:</i>		
Ed. 502	Educational Research	3

*Normally required for degree and certification.

**Normally required for certification only.

***One semester of Ed. 528 is required for degree; a second semester of Ed. 528 is normally required for certification.

Note: In certain circumstances, Ed. 530 may be substituted for Ed. 529 and Ed. 522 may be substituted for another course.

Reading

Dr. Raymond L. Kimble, Director

The Reading Education program offers several options for students. The person who holds a teaching certificate may choose to obtain the Reading Specialist certification as an endorsement. The person who is interested in a master's degree may elect the *reading specialist certification option*, a *developmental education option*, or a *general studies option*.

The *Foundation* course requirements (9 credits) are the *same* for all degree options and include the following courses:

<i>Foundation Courses (9 credits)</i>		<i>Credits</i>
Ed. 501	Educational Psychology	3
Ed. 502	Educational Research	3
Ed. 508	Advanced Foundations of Education	3

The various options have the following requirements in addition to the Foundation course requirements.

Reading Specialist Certification Option

Ed. 541	Foundations of Reading	3
Ed. 542	Psycholinguistic Implications for the Teaching of Reading	3
Ed. 543	Clinical Diagnosis of Reading Disabilities	3
Ed. 545	Reading in the Content Areas	3
Ed. 546	Organization and Operation of Reading Programs	3
Ed. 549	Instructional Practicum	3
	Electives	3-9

Degree Requirements: Thirty (30) credits, an approved professional contribution, a comprehensive examination, or thirty-six (36) credits and a comprehensive examination are required for the Master of Science in Reading Education with the Reading Specialist Option. If the Reading Specialist courses are completed before all the degree requirements, the student can obtain the certificate by completing the competency examination. The comprehensive examination must also be completed to meet the degree requirement.

Developmental Education Option

Engl 505	Modern Grammar in the English Curriculum	3
Engl 506	Composition in the English Curriculum	3
Ed. 543	Clinical Diagnosis of Reading Disabilities	3
Ed. 545	Reading in the Content Areas	3

Ed. 548	Teaching of Study Skills	3
Ed. 549	Instructional Practicum	3
	Electives	3-9

Degree Requirements: Thirty (30) credits, an approved professional contribution, a comprehensive examination, or thirty-six (36) credits and a comprehensive examination are required for the Master of Science in Reading Education with the Developmental Education Option.

General Studies Option

Ed. 541	Foundations of Reading	3
Ed. 545	Reading in the Content Areas	3
Ed. 548	The Teaching of Study Skills	3
	Electives	12-18

This option requires prior approval by the mentor of a sequence of studies directed toward a professionally identified goal.

Degree Requirements: Thirty (30) credits, an approved professional contribution, a comprehensive examination, or thirty-six (36) credits and a comprehensive examination are required for the Master of Science in Reading Education with the General Studies Option.

Certification Program In Reading

Certification Requirements: Completion of the following courses if not previously transcribed or documented as being completed to the department's satisfaction shall constitute the requirements for certification. In addition, the student must complete a competency examination.

Degree Requirements:

Ed. 541	Foundations of Reading	3
Ed. 542	Psycholinguistic Implications for the Teaching of Reading	3
Ed. 543	Clinical Diagnosis of Reading Disabilities	3
Ed. 545	Reading in the Content Areas	3
Ed. 546	Organization and Operation of Reading Programs	3
Ed. 549	Instructional Practicum	3

Reading Supervisor

The University offers an approved program for becoming certified as a Reading Supervisor in Pennsylvania. Please see the program description in the Supervision section of this catalog.

Supervision

Dr. Thomas W. Gerrity, Director

Objectives

The preparation of elementary and secondary school subject supervisors. The Supervision credential may be pursued in the following areas:

School Guidance Services	Foreign Languages
Reading	Mathematics
Biology	Chemistry
Physics	Social Studies
Science	Communication
English	

Admission Requirements

The candidate must meet the following requirements for acceptance into the Supervision program:

1. Possess adequate competency in the subject to be supervised. The application will be screened by the program faculty in the area for which the supervisory certificate is to be awarded.
2. Possess a valid teacher's certificate in area of concentration.
3. Complete an application for the Graduate School and meet the Graduate School admission standards.

Course Requirements

A student is required to complete a minimum of 24 credits in order to satisfy the competency requirements for supervisory certification, in order to be recommended by the University to the State Department of Education for certification as a supervisor. A suitable program, taken from the following courses and courses in the appropriate discipline, will be developed by the mentor in consultation with the student. The program must also be approved by the University's Certifying Officer. A competency needs analysis will be made to assist in developing a program of studies.

<i>Courses</i>	<i>Credits</i>
Ed. 502 Educational Research	3
Ed. 509 Improving Instruction	3
Ed. 510 Curriculum Theory and Development	3
Ed. 522 Problems in School Administration and Supervision	3
Ed. 529 School Law	3
Ed. 535 Principles and Practices of Supervision	3
Ed. 536 Practicum in Supervision	3
COUN 503 Group Counseling and Dynamics	3
COUN 508 Developmental Psychology	3

Course Descriptions

General Courses

	<i>Credits</i>
Ed. 501. <i>Educational Psychology</i> (Ed. 201)*	3
(Prerequisite, teaching experience or consent of instructor) A study of psychological principles related to education, including learning, motivation, evaluation, with emphasis on practical application in the classroom setting.	
Ed. 502. <i>Educational Research</i> (Ed. 202)	3
This is a basic course concerned with the nature of research problems in education. It is intended to introduce students to the basic principles of research; the more frequently employed research methodologies; the conceptualization of research problems in education; the formulation of hypotheses; and the study of selected data-gathering instruments. A research project is required, wherein the students will gain a facility in the critical analyses of research material essential to their graduate studies.	
Ed. 503. <i>Educational Tests and Measurement</i> (Ed. 203)	3
Fundamental concepts applicable to educational testing, including validity, reliability, types of scores. Uses of standardized tests, especially achievement tests, in school settings. Methods of developing classroom tests.	
Ed. 508. <i>Advanced Foundations of Education</i> (Ed. 208)	3
This course is intended to present the foundations of education in an integrated, multi-disciplinary approach. It will trace the development of education both as an institution and in terms of the ideas that have shaped that institution. The goal is a thorough perspective of education as it is today.	
Ed. 509. <i>Improving Instruction</i> (Ed. 231)	3
Students will study a wide spectrum of techniques and strategies to improve classroom instruction and enhance learning. Emphasis will be on practical classroom applications.	
Ed. 510. <i>Curriculum Theory and Development</i> (Ed. 233)	3
Principles of curriculum construction which underlie the reorganization of the program of studies for elementary and secondary schools, sources of the curriculum, methods of organization, structure of knowledge, and curriculum planning and development.	
Ed. 511. <i>Computer Literacy for Educators</i> (E/CS 208)	3
This course for educators is designed to meet the following goals (1) knowledge of how computers operate; (2) develop ability to use the computer; (3) become aware of some of the applications of computers; (4) to understand the social implications of computers and computing; and (5) to understand the rudiments of the LOGO computing language, a language commonly available for microcomputers which promotes structured programming characterized by top-down design with stepwise refinement through modularization. A computer fee is charged.	
Ed. 513. <i>Classroom Management</i> (Ed. 213)	3
In-depth study of the rationale, theories, and techniques for creating a situation where learning can take place and for handling specific individual and group behavior problems in productive ways.	

* course number used before Fall 1990 given in parenthesis

Ed. 514. *Group Processes in Classrooms* (New) 3
 A study of group processes as they impact on the management and instruction of classrooms. It will be presented in both its theoretical and practical dimensions.

Administration

Ed. 521. *Educational Administration* (Ed. 221) 3
 A foundations course in general school administration, involving philosophical bases, organization in a democratic society, administration of instruction and personnel. Required of all students beginning a major in educational administration and a prerequisite for other courses in educational administration.

Ed. 522. *Problems in School Administration and Supervision* (Ed. 222.1) 3-6
 (Prerequisite, Ed. 521). A seminar for the student seeking certification in elementary or secondary school administration or in supervision. Emphasis is upon in-depth examination of a selected problem or issue in administration or supervision. Admission with approval of the instructor.

Ed. 523. *Public Relations for Educators* (Ed. 222.2) 3
 An introduction to school public relations. Emphasis is focused upon establishing contact between schools and the general public through the use of mass media.

Ed. 524. *Personnel Management for Educators* (Ed. 222.3) 3
 An overview of the establishment and performance of personnel policies as they relate to recruitment, selection, orientation, deployment, promotion, evaluation, in-service development, morale, and dismissal. Admission with consent of instructor.

Ed. 525. *School Finance* (Ed. 222.4) 3
 An introduction to public school finance. Emphasis is focused upon the responsibilities in handling student funds, district budgeting and accounting, and modern planning-programming-budgetary systems. Admission with consent of instructor.

Ed. 526. *School Plant Management* (Ed. 222.5) 3
 A study of problems involved in the planning, operation, and maintenance of school plant facilities. Emphasis is upon efficient use of existing plant facilities and their possible adaptation to meet modern educational and community needs. Admission with consent of instructor.

Ed. 527. *School and Community Relations* (Ed. 222.6) 3
 A study of the relationship of the school to the community. Emphasis is focused upon the school-community concept, community analysis, community characteristics affecting quality education, and public participation in educational planning. Admission with consent of instructor.

Ed. 528. *Practicum in School Administration* (Ed. 222.7) 3-6
 (Prerequisite, Ed. 532 or Ed. 533 as applicable) The purpose of this course is to give the student practical experience in administrative work. A minimum of 130 clock hours in one semester must be spent on this work. Work is done under supervision in a local school system according to a definite schedule approved by the instructor and the administrator of the school system involved. Admission by special arrangement. (Normally offered Fall and Spring semesters only.)

Ed. 529. *School Law* (Ed. 222.8) 3

A study of common law legislative enactments and directives of the Department of Education as they pertain to school systems.

Ed. 530. *Seminar in Advanced School Law* (Ed. 222.9) 3

A comprehensive study of legal issues related to the operation of the nation's schools. Special emphasis is placed on issues in school law that may affect the nation and substantially alter the course of education. Admission with approval of the instructor.

Ed. 531. *Educational Management* (Ed. 223) 3

An overview of functions and problems in three major areas of responsibility: finance, law, and personnel.

Ed. 532. *The Elementary School Principal as Administrator* (Ed. 224) 3

(Prerequisite, Ed. 521) A technical course emphasizing the administrative duties and responsibilities of the elementary school principal. Attention is focused on types of organization, program of studies, pupil personnel, teaching staff, plant and equipment, and community relationships.

Ed. 533. *The Secondary School Principal as Administrator* (Ed. 225) 3

(Prerequisite, Ed. 521) A technical course emphasizing the administrative duties and responsibilities of the secondary school principal. Attention is focused on problems of organization, program of studies, pupil personnel, teaching staff, plant and equipment, and community relationships.

Ed. 534. *Administration and Organization of the Middle School* (Ed. 226) 3

(Prerequisite, Ed. 521) A technical course emphasizing the organizational and administrative duties and responsibilities of the middle school principal. Attention is focused on the problems of organization, program of studies, pupil personnel, teaching staff, plant and equipment, and community relationships.

Ed. 535. *Principles & Practices of Supervision* (Ed. 237) 3

A description of a philosophy of supervision, principles of supervision, the role of the supervisor, planning a supervisory program, techniques of supervision, evaluation, coordinating the instructional program, and trends in supervision.

Ed. 536. *Practicum in Supervision* (Ed. 238) 3

(Prerequisites, Ed. 509 and Ed. 535) The purpose of this course is to give the student practical experience in supervision. A minimum of 90 clock hours in one semester must be spent on this assignment. This is accomplished under the supervision of a certified supervisor, according to a definite schedule mutually approved by the instructor and cooperating supervisor.

Reading

Ed. 541. *Foundations of Reading* (Ed. 291) 3

A basic course in the foundation of reading designed to provide an introduction to reading instruction and reading programs. A study of the reading skills, techniques and methods which are essential for effective reading will be examined.

- Ed. 542. *Psycholinguistic Implications for the Teaching of Reading* (Ed. 292) 3
(Prerequisite, Ed. 541 or consent of instructor) A course designed to acquaint students with theories of the reading process as they relate to children's language acquisition and learning to read. Consideration will be given to the linguistic aspects of teaching reading.
- Ed. 543. *Clinical Diagnosis of Reading Disabilities* (Ed. 293) 3
(Prerequisite, Ed. 542 or consent of instructor) A laboratory course designed to assist the reading specialist in becoming proficient in diagnostic skills. Standardized tests and informal assessment instruments will be examined. The student will be required to prepare a Diagnostic Case Report on a student experiencing difficulty in reading. Selected assessment tools will be identified to recommend as appropriate for use by the classroom teacher.
- Ed. 544. *Instructional Materials and Strategies for the Teaching of Reading* (Ed. 290) 3
A comprehensive survey of materials, resources and devices used to teach reading. Emphasis will be placed on traditional and current trend materials, laboratory kits, teacher-made devices and instructional media.
- Ed. 545. *Reading in the Content Areas* (Ed. 295) 3
A course designed for acquainting students with procedures of teaching functional reading skills in the elementary and secondary schools. Emphasis will be placed on the specialized vocabularies, concepts and skills which are considered necessary for the comprehension of reading materials pertinent to content area subjects. Various resources and devices will be examined.
- Ed. 546. *Organization and Operation of Reading Programs* (Ed. 296) 3
A lecture-discussion course dealing with the responsibilities in setting up and directing a school reading program. Attention is given to types of programs and approaches to teaching reading in these different organizational patterns as well as incorporating procedures to support the regular classroom program. Admission with approval of instructor.
- Ed. 547. *Classroom Diagnosis of Reading Problems* (Ed. 297) 3
The course is designed to examine formal and informal techniques of diagnosis appropriate for use by the classroom teacher. Consideration will be given to identifying skill deficiencies exhibited by students experiencing reading problems. An examination of appropriate diagnostic techniques will be made. Interpretation of the assessment material will be made to determine their effectiveness for specific situations.
- Ed. 548. *Teaching of Study Skills* (Ed. 299) 3
A course designed to apprise the student of strategies effective in developing desirable study habits essential for learning. Consideration will be given to receptive, reflective, and expressive skills.
- Ed. 549. *Instructional Practicum* (Ed. 294) 3
(Prerequisite, Ed. 543 or Ed. 547 or consent of instructor) A practicum designed to provide a supervised instructional experience. The student is expected to assess and initiate a program of instruction for a disabled learner. A report of the results of the diagnosis, remediation, progress, and recommendations will be compiled.

Mathematics

- Ed. 554. *Modern Algebra for Teachers* (Math 404) 3
A treatment of groups, rings, etc. culminating in the negative result, Abel's Theorem, that there can be no formula for solving polynomial equations of degree greater than four. Whenever possible, the material shall be related to the various subsets of the real number system covered in the secondary schools.
- Ed. 555. *Linear Algebra and Theory of Equations* (Math 405) 3
A study of second, third and fourth degree equations and systems of equations. Along with the methods of solution, an attempt will be made to provide the teacher with a backlog of applications for each type in the form of word problems.
- Ed. 556. *Introductory Analysis* (Math 406) 3
An indepth study of the concepts and principles of calculus that are generally encountered in a secondary school analysis course. Emphasis will be placed on the development of the concepts of limit, derivative and integral and the various techniques a teacher might utilize in presenting them to a secondary school class. The student need not presently possess facility with calculus as this will develop during the course.
- Ed. 557. *Geometry* (Math 407) 3
A study of Euclidean geometry including a discussion of methods and materials that teachers may employ in order to generate interest and enhance presentations. Wherever possible, relevant practical applications will be provided. A discussion of certain transformations will also be included.
- Ed. 558. *Probability and Statistics* (Math 408) 3
An axiomatic approach to probability covering the basic rules, independence and conditional probability, probability functions, normal curve and hypothesis testing.
- Ed. 559. *Introduction to Computing* (Math 409) 3
A discussion of various secondary-school problem-solving techniques that involves the use of computers.

Specific Subject Matter Methods and Miscellaneous

- Ed. 560. *Subject Methods* (Ed. 204) 3
Utilizing knowledge of planning and teaching generally, students will be guided in the analysis of specific content and techniques for teaching that content. They will demonstrate their ability to carry out plans in "micro" teaching experiences. Offered for various content areas.
- Ed. 562. *Teaching the Gifted Child* (Ed. 282) 3
Teachers will have an opportunity to study the broad range of giftedness in children. Emphasis will be on how to foster the development of gifted youngsters in our schools. Programming for the gifted will be studied also.
- Ed. 563. *Children's Literature* (Ed. 283) 3
Literature for children from kindergarten through the elementary school years. Children's literary needs and interests will be emphasized.

Ed. 564. *Teaching Elementary Language Arts* (Ed. 284) 3

Focus is on the place of the language arts in the total elementary school curriculum. Topics included are integration of reading, writing, speaking and listening; correlation of these four areas of the language arts with the content subjects; and a consideration of innovative spelling and handwriting programs.

Education 567. *Teaching Elementary Social Studies* (Ed. 287) 3

Students will study selected topics, problems, and recent developments in the elementary/social studies curriculum and instruction.

Ed. 568. *Education of the Exceptional Child* (Ed. 268) 3

A general view of the field; historical background — both philosophical and legislative, with special emphasis upon PL 94-142. Physical, mental and emotional handicaps will be reviewed in some detail. Special concerns of gifted children will also be presented. Preventative and remedial programs and practices will be emphasized.

Ed. 569. *Workshop in Education* (Ed. 289) 3

Students will have the opportunity to develop and test innovative curriculum materials and strategies with special emphasis on models for individualizing instruction.

Ed. 571. *Teaching Elementary Mathematics* (Ed. 219) 3

This course is designed to provide the elementary education major with planning and instructional strategies appropriate for use in the science and mathematics areas of the elementary curriculum. An analysis of content will be made in light of the needs of the elementary school, the elementary student and society.

Ed. 574. *Teaching Elementary Science* (New) 3

Modern science curricula in elementary education. Consideration will be given to scientific processes, organization, planning, methods, materials and evaluation.

Ed. 576. *Secondary S-T-S Methods* (New) 3

This course will acquaint in-service teachers with the basic tenets of the field of science-technology-society and how it may pertain to secondary science education. By examining methods of introducing S-T-S issues and topics into the secondary school curriculum, students will be able to construct and implement S-T-S units for their own use.

Internship and Research

Ed. 580. *Teaching Internship* (Ed. 260) Variable 3-9

(Prerequisite: Ed. 313) Involvement in actual teaching in a secondary school with appropriate supervision at both the secondary and University levels. Admission to the teaching internship is by permission of the Education Department Chair.

Ed. 590. *Research Seminar* (Ed. 300) Variable to 3

Designed for students who are working on their M.A. thesis. Registration is only with permission of the student's advisor and the Department Chair.

Ed. 592. *Directed Study* (Ed. 300.1) Variable to 6

This course is designed for students working in independent study on special projects and workshops. Registration in this course requires permission of the student's mentor, and the Department Chair.

Department of Human Resources

Dr. John K. Stout, Chair

General Information

The Department offers coursework leading to Master of Science degrees in Community Counseling, Health Administration, Human Resources Administration, Rehabilitation Counseling, and School Counseling. The following policies and procedures apply to all these curricula. Specific curricular requirements are listed under the respective programs.

Admissions

The applicant for admission to any Departmental program must possess a bachelor's degree from an accredited college or university and provide the Graduate School with evidence of satisfactory undergraduate preparation. The ordinary standard for admission is an undergraduate QPI of at least 2.75 on a grading scale of 4.00. Students falling below this level may submit other evidence of their ability to complete successfully a graduate program, such as grades in other graduate level courses, a record of progressively higher work responsibilities, or scores from the Miller Analogies Test or Graduate Record Examination and may be accepted on a probationary basis. Students accepted on probation cannot enroll for more than six credits in a semester and must obtain a cumulative QPI of at least 3.0 after completing nine credits of coursework to be removed from probation. A personal interview prior to acceptance is required. New students may start coursework in Fall and Spring semesters only. Applicants must be accepted by the Graduate School before starting courses. International students should score at least 575 on the TOEFL.

Standards of Progress and Transfer of Credits

Please refer to the Academic Regulations on page 16 regarding standards of progress and transfer of credits for the Graduate School. In addition to academic competence, the student is continuously evaluated on commitment to the program and the profession, and on personal and emotional characteristics and qualities related to successful professional performance.

Directed Study

Students in any program may enroll for a Directed Study course to pursue an area of interest under the guidance of a faculty member. In extraordinary cases, a regular course may be offered to a student as a reader. Approval of the Director is required for both directed study and reader courses.

Comprehensive Examination

Students in all programs must successfully pass a comprehensive examination which may combine written, oral, and experiential components. Application for the comprehensive examination in all programs except School Counseling is made when the student registers for the Counseling Practicum (COUN 590, 591) or Administrative Issues (HRA 509). The examination is completed at the midpoint of the course. Application for comprehensive examination in School Counseling must be made prior to the deadline listed in this catalog.

Application for Degree

Application for degree should be made at registration for the last semester of coursework. Degrees are conferred in May, August, and December, but commencement exercises are held in May only.

Financial Aid

The Department has several **teaching assistantships** and **research assistantships** available. Application for assistantships are made through the Graduate School. Students must be accepted as a student in one of the Departmental programs by March 1 to be considered for an assistantship for the following Fall semester.

Limited financial aid has been available in the form of **traineeships** from the Rehabilitation Services Administration of the United States Department of Education for Rehabilitation Counseling students. The full-time student traineeship may pay the student's tuition, fees, and provide a monthly stipend. Application forms are available from the Department of Human Resources (717) 941-7633. Ideally, selections are made by April 30 for the following Fall semester although the awards may not be finalized until late Summer depending upon the action of the U.S. Congress.

Scheduling

Classes are offered from 4:30 p.m. to 7:10 p.m. and from 7:20 p.m. to 10:00 p.m. on Mondays through Thursdays. Courses are scheduled to enable full-time students to attend classes two or three nights a week; part-time students usually attend one or two nights a week. Each course meets one night a week in the Fall and Spring semesters and twice weekly during Intersession and Summer sessions. Internships in Community Counseling and Rehabilitation Counseling may be spread over several semesters to accumulate the needed number of clock hours.

Other Information

The student should refer to the Academic Regulations section of the Graduate School catalog for additional relevant policies.

Health Administration

Dr. Daniel J. West, Director

Program Objectives

The objective of the Health Administration program is to prepare individuals for entry in and/or advancement in the broad field of health administration. Specifically, the program is designed to: (1) academically prepare individuals to enter supervisory and administrative positions; (2) enhance the performance of individuals employed in supervisory and administrative positions, but who lack academic training and credentials; and (3) academically prepare individuals to enter or advance in a variety of staff positions. The program emphasizes a learning environment wherein the student can acquire academic knowledge, gain practical skills, and engage in self-exploration and personal growth.

The Health Administration Profession

Supervisory and administrative personnel work in a variety of health-related organizations and service delivery systems such as hospitals, long-term care facilities, rehabilitation centers, home health organizations, and various planning and regulatory agencies. Depending on the position, they may be engaged in line supervision of direct service workers or other managers, or they may be involved in staff positions such as planning, community relations, education, training, staff development, personnel, fund raising, and marketing.

Curriculum

The Health Administration program is a 36 credit curriculum leading to the Master of Science degree. The curriculum consists of nine required credits focusing on general organizational, financial, and administrative knowledge applicable to staff, supervisory, and administrative positions in most organizations; a minimum of 12 required credits focusing specially on health services, systems and related issues; and a maximum of 15 elective credits. Elective credits may include additional health administration courses and/or human resources administrative courses. All courses should be chosen to complement and assist in achieving the student's career goals.

The program usually accepts only those applicants who have at least 12 months of professional work experience, which may run concurrent with the graduate program. Individuals without work experience are accepted, but may be required to enroll in an internship to gain practical experience. These individuals should discuss their employment possibilities with the Program Director during their interview. Applicants should also be prepared to discuss their career goals with the Program Director during a personal interview, which is

required prior to acceptance, and show how they see the curriculum supporting their longer-term goals.

The degree can be received in 12 months of full-time academic study, although most students attend on a part-time basis and earn their degree in approximately 24 months. Ordinarily, the degree must be completed within six consecutive years. A maximum of 30 new students start coursework each Fall and Spring semester. New students may not start coursework in Intercession or during the Summer. Applicants must be accepted by the Graduate School before starting courses. HRA 500 and HRA 501 are generally the first courses taken.

Refer to General Information under the Department of Human Resources for policies and procedures applicable to all Departmental programs.



Dr. Dan West, Director of the Health Administration program.

Health Administration Curriculum

Professional Foundations + *(9 credits required)*

HRA 500	Organization and Administration
HRA 501	Financial Administration
HRA 509	Administrative Issues

Major Courses *(12 credits required)*

HAD 510	Health Finance*
HAD 511	Issues in Health Administration
HAD 512	Health Services and Systems
HAD 513	Legal Aspects of Health Care
HAD 514	Health and Hospital Administration
HAD 515	Marketing Health and Human Services
HAD 516	Long Term Care Administration
HAD 580	Internship in Health Administration**

General Electives *(Maximum 15 credits)*

HRA 520	Managerial Leadership
HRA 521	Motivation and Work Behavior
HRA 522	Program Planning and Evaluation
HRA 523	Individual Behavior in Organizations
HRA 524	Group Behavior in Organizations
HRA 525	Productivity Management
HRA 526	Computer Technology***
HRA 530	Personnel Administration
HRA 531	Staff Development
HRA 532	Labor Relations
HRA 533	Compensation Systems
HRA 534	Health, Safety, and Security
HRA 535	Employee Assistance Programming
HRA 536	Industrial Rehabilitation
HRA 537	Benefits Systems

Total Credits for Degree: 36

*Required Course

**An insurance fee is charged

***A laboratory fee is charged.

+ Consult Departmental and University schedules for course projections.

Human Resources Administration

Dr. John K. Stout, Director

Program Objectives

The objective of the Human Resources Administration program is to prepare individuals for entry into and/or advancement in the broad field of human resources. Specifically, the program is designed to: (1) academically prepare individuals to enter supervisory and administration positions; (2) enhance the performance of individuals employed in supervisory and administrative positions, but who lack academic training and credentials; and (3) academically prepare individuals to enter or advance in a variety of staff positions and departments. The program emphasizes a learning environment wherein the student can acquire academic knowledge, gain practical skills, and engage in self-exploration and personal growth.

The Human Resources Profession

The Human Resources Administration program prepares individuals to enter and/or advance in the following two Areas of Application:

ORGANIZATIONAL SUPERVISION. This area of application emphasizes preparation for and/or advancement in supervisory and administrative positions in public and private health, education, and human services organizations, agencies, and systems. Supervisory and administrative personnel work with people and need a variety of human, conceptual, and technical skills. They use the processes of planning, organizing, staffing, influencing, and controlling the efforts of individuals and commit the use of organizational resources to achieve organizational goals. In practicing the art of getting things done with and through people, supervisors and administrators are concerned with increasing the effectiveness and efficiency of a department or organization.

PERSONNEL. This area of application emphasizes preparation for and/or advancement in human resources systems. These specialists usually work in a staff or consultative capacity in most organizations. Their tasks may involve assessing personnel needs, recruitment, selection, orientation, and training; designing and implementing compensation and benefit systems; employee assessment and career development; developing discipline and grievance-handling systems; working with unions or union activity; ensuring the organization's compliance with equal employment opportunity and other governmental regulations; designing and implementing

programs to ensure employee health and safety; and, providing assistance to employees with personal problems that influence their work performance.

Curriculum

The Human Resources Administration program is a 36 credit curriculum leading to the Master of Science degree. The curriculum consists of nine required credits focusing on general organizational, financial, and administrative knowledge applicable to staff, supervisory, and administrative positions in most organizations. The remaining 27 credits are distributed in two Areas of Application and Elective courses. Application Area 1 — Organizational Supervision and Area 2 — Personnel contain courses from which any four are required to constitute an Area of Application. The remaining 15 credits are elective and may be taken from the other Area of Application courses and/or from health administration courses. These courses should be chosen to complement the student's Area(s) of Application. Students generally elect their Area(s) of Application at the time of acceptance into the program.

The program usually accepts only those applicants who have at least 12 months of professional work experience, which may run concurrent with the graduate program. Individuals without work experience are accepted, but may be required to enroll in an internship to gain practical experience. These individuals should discuss their employment possibilities with the Program Director during their interview. Applicants should also be prepared to discuss their career goals during a personal interview, which is required prior to acceptance, and show how they see the curriculum supporting their longer-term goals.

The degree can be received in 12 months of full-time academic study, although most students attend on a part-time basis and earn their degree in approximately 24 months. Ordinarily, the degree must be completed within six consecutive years. A maximum of 30 new students start coursework each Fall and Spring semester. New students may not start coursework in Intersession or during the Summer. Applicants must be accepted by the Graduate School before starting courses. HRA 500 and HRA 501 are generally the first courses taken.

Areas of Application

Areas of Application should be considered similar to the concept of a major, that is, an area in which the student has developed an area of expertise. The student normally elects an Area of Application on the basis of interest and career goals although it is not required that

any Area(s) of Application be elected. The program contains two Areas of Application. Area 1 — Organizational Supervision is the most general (least specialized) of the two Areas of Application and provides the broadest academic preparation within the field of administration. Area 2 — Personnel is more specialized and prepares the student for a more limited area(s) of application. The student should consider how electing two Areas of Application can help in reaching career goals. The Area(s) of Application are shown on the student's transcript.



Dr. John Stout, Chairman, Department of Human Resources & Director of the program in Human Resources Administration.

Human Resources Administration Curriculum

Professional Foundations +

(9 credits required)

HRA 500	Organization and Administration
HRA 501	Financial Administration
HRA 509	Administrative Issues

Areas of Application

(Two Areas of Application may be chosen)

Area 1 — Organizational Supervision

(12 credits required)

HRA 520	Managerial Leadership
HRA 521	Motivation and Work Behavior
HRA 522	Program Planning and Evaluation
HRA 523	Individual Behavior in Organizations
HRA 524	Group Behavior in Organizations
HRA 525	Productivity Management
HRA 526	Computer Technology*
HRA 580	Internship in Human Resources**

Area 2 — Personnel

(12 credits required)

HRA 530	Personnel Administration
HRA 531	Staff Development
HRA 532	Labor Relations
HRA 533	Compensation Systems
HRA 534	Health, Safety, and Security
HRA 535	Employee Assistance Programming
HRA 536	Industrial Rehabilitation
HRA 537	Benefits Systems
HRA 580	Internship in Human Resources**

Electives

HAD 510	Health Economics and Finance
HAD 511	Issues in Health Administration
HAD 512	Health Services and Systems
HAD 513	Legal Aspects of Health Care
HAD 514	Health and Hospital Administration
HAD 515	Marketing Health and Human Services
HAD 516	Long Term Care Administration

Total Credits for Degree: 36

*A laboratory fee is charged

**An insurance fee is charged

+ Consult Departmental and University schedules for course projections

Community Counseling

(Formerly Individual and Group Counseling)

Dr. David W. Hall, Director

Program Objectives

The objective of the Community Counseling program is to prepare professionals for direct entry into and/or advancement in counseling and private and public human service organizations and systems. Specifically, the program is designed to: (1) enhance knowledge of counseling concepts and practices; (2) provide individuals with the counseling skills necessary to function in agency settings; (3) prepare individuals for certification as counselors, and (4) enhance individuals' employability in entry level or advanced clinical positions in human service settings.

The program offers a learning environment whereby the student acquires the academic competencies of the profession, refines them through practical experience, and increases self-understanding, self-confidence, and personal effectiveness.

The Counseling Profession

According to the American Association for Counseling and Development, counselors are skilled professionals who are trained to help others gain a perspective on their lives, explore options, make decisions, resolve problems, and take action. Counselors work with individuals, couples, families, and groups of persons who experience academic, behavioral, career, emotional, interpersonal, and social problems. By establishing an effective and trusting helping relationship, a counselor assesses a client's strengths and resources, and helps the client increase life-management skills so that mutually agreed upon goals may be achieved.

Employment Opportunities

According to the *Occupational Outlook Handbook*, U.S. Department of Labor, employment for counselors who work in the fields of mental health, marital and/or family difficulties, alcoholism, drug abuse, and aging will grow faster than average through the mid-1990's. Private practice, community and social service agencies, and human development and employee assistance programs in private industry are among the settings in which growth in counselor employment will occur.

Curriculum

The Community Counseling program is a 48 credit curriculum leading to the Master of Science degree. Thirty-six required credits include 27 credits of coursework in principles and practices of counseling, three credits of practicum and six credits of internship. Twelve credits of electives are offered to provide students with opportunities for additional study in individual areas of interest and for development of skills in dealing with specific client populations. Professional experience in a counseling-related field is not required for entry into the program.

Counselor Certification

The Community Counseling program is designed so that students will meet the academic requirements for recognition as a National Certified Counselor (NCC). Graduates may apply to the National Board of Certified Counselors (NBCC) to take a national certification examination at the time of graduation. Students who pass the certification examination will be granted certification after completion of two years post-masters professional counseling experience. Students who wish to explore other types of counselor certification should consult with the program director. All inquiries regarding certification and application for same should be directed to:

National Board for Certified Counselors, Inc.
Suite 402, 5999 Stevenson Avenue
Alexandria, VA 22304
Phone (703) 461-NBCC

Refer to General Information under the Department of Human Resources for policies and procedures applicable to all Departmental programs.

Community Counseling Curriculum

Professional Foundations + (36 credits required)

- COUN 500 Professional Issues in Counseling
- COUN 501 Case Management and Interviewing
- COUN 502 Counseling Theories
- COUN 503 Group Counseling and Dynamics
- COUN 504 Use of Tests in Counseling
- COUN 505 Research in Counseling
- COUN 506 Social and Cultural Issues
- COUN 507 Career Development
- COUN 508 Developmental Psychology
- COUN 590 Practicum in Community Counseling
- #COUN 595 Internship in Community Counseling (6 credits)

General Electives
(12 credits required)

Disability and Specialty Populations

- COUN 520 Rehabilitation Services
- COUN 521 Physical Disabilities
- COUN 522 Vocational Aspects of Disability
- COUN 523 Industrial Rehabilitation
- COUN 531 Psychology of Adjustment
- COUN 560 Addictive Behaviors
- COUN 561 Substance Abuse Prevention and Education
- COUN 562 Health and Legal Aspects of Substance Abuse
- COUN 565 Psychiatric Disorders
- COUN 570 Problems of Adolescence
- COUN 571 Counseling Issues for Women

Counseling Systems

- COUN 532 Utilization of Community Resources
- COUN 540 Family Counseling and Therapy
- COUN 566 Behavioral Counseling
- COUN 567 Health and Behavior
- COUN 572 Techniques of Consultation

Clinical Experience

- COUN 594 Practicum in Group Counseling

Directed Study

- COUN 582 Directed Study

Total Credits for Degree: 48

Total Required Credits: 36

Total Elective Credits: 12

+ Consult Departmental and University schedules for course projections.

An insurance fee is charged.



Rehabilitation Counseling

Dr. David W. Hall, Director

Program Objectives

The objective of the Rehabilitation Counseling program is to prepare rehabilitation counselors and related professional personnel for entry into and/or advancement in counseling-related positions in public and private rehabilitation agencies, organizations, and systems.

More specifically, the program is designed to: (1) enhance knowledge of rehabilitation concepts and practices; (2) provide individuals with the counseling skills necessary for functioning in rehabilitation settings; (3) prepare individuals for certification as rehabilitation counselors; and (4) enhance individuals' employability in entry level or advanced clinical positions in rehabilitation settings. The program offers a learning environment in which the student can acquire the academic competencies of the profession and refine them through supervised practical experience. The program also provides a facilitative process through which the student can increase self-understanding, self-confidence, and personal effectiveness.

The Rehabilitation Counseling Profession

The rehabilitation counselor is an intervention specialist who either delivers or arranges to deliver therapeutic services to a variety of persons with handicaps to assist them in reaching mutually agreed upon goals. The specific roles and functions of the rehabilitation counselor, the services provided, and the goals established will vary depending on the agency or organization in which the counselor is employed. In the typical state-federal vocational rehabilitation agency, medically, mentally, emotionally, or socially handicapped individuals are provided a variety of psychological, medical, social and vocational services to assist the person achieve independence in living and in becoming competitively employed. In a mental health/mental retardation or drug and alcohol facility, the counselor may provide personal, social, or vocational adjustment services to assist the individual achieve the maximum health, well-being, and independence possible.

Employment Opportunities

The *Occupational Outlook Handbook*, a publication of the U.S. Department of Labor, projects the employment opportunities in rehabilitation counseling to be good throughout the country through the 1990's. Follow-up data from over 500 graduates of the program indicate that approximately fifteen percent received doctorates or are presently working on doctorates in rehabilitation or some related counseling profession. The overwhelming majority of the other

graduates are employed in over thirty states throughout the country in a variety of public and private community agencies and organizations dealing with addictive problems; correctional rehabilitation; physically, auditorially, or visually handicapped; the mentally retarded or emotionally disturbed, the learning disabled; the socially-culturally disadvantaged; and geriatric clients.

Curriculum

The Rehabilitation Counseling program is a 48 credit curriculum leading to the Master of Science degree. Thirty required credits include coursework in foundations of rehabilitation counseling, three credits of practicum, and a minimum of six credits of internship. Elective credits in the areas of disability and specialty populations, career and life span development, and counseling systems are selected in consultation with the student's mentor.

Financial Aid

Approximately 10 traineeships sponsored by the Rehabilitation Services Administration of the U.S. Department of Education are available for full-time students in the Rehabilitation Counseling program. Trainees may receive a stipend of between \$500 and \$600 each month plus waiver of tuition for up to 48 graduate credits. Application forms are available from the Department of Human Resources (717) 941-7633. Ideally, selections are made by April 30 for the following Fall semester although the awards may not be finalized until late Summer depending upon the action of the U.S. Congress.



Rehabilitation Counselor Certification

Because the Rehabilitation Counseling program is fully accredited by the Council on Rehabilitation Education, graduates are eligible to sit for the national qualifying examination to become a Certified Rehabilitation Counselor (CRC). Students are encouraged to apply to take the examination in the final semester of study. Students who pass the examination are certified upon submitting evidence of successful completion of the degree and internship.

Rehabilitation Counseling courses are approved by the Commission on Rehabilitation Counselor Certification (CRCC) toward certification as well as for certification maintenance credits. All inquiries regarding certification and application for same should be directed to:

The Commission on Rehabilitation Counselor Certification
156 Shure Drive, Suite 350
Arlington Heights, Illinois 60004
Phone (708) 394-2104

***The Rehabilitation Counseling Program has been Accredited
by the Council on Rehabilitation Education (CORE)
Since 1975***

Refer to General Information under the Department of Human Resources for policies and procedures applicable to all Departmental programs.

Rehabilitation Counseling Curriculum

Professional Foundations + (30-33 credits required)

COUN 501	Case Management and Interviewing
COUN 502	Counseling Theories
COUN 504	Use of Tests in Counseling
COUN 505	Research in Counseling
COUN 520	Rehabilitation Services
COUN 521	Physical Disabilities
COUN 522	Vocational Aspects of Disability
COUN 591	Practicum in Rehabilitation Counseling
#COUN 596	Internship in Rehabilitation Counseling (6-9 credits)

General Electives
(15-18 credits required)

Disability and Specialty Populations

- COUN 531 Psychology of Adjustment
- COUN 560 Addictive Behaviors
- COUN 561 Substance Abuse Prevention and Education
- COUN 562 Health and Legal Aspects of Substance Abuse
- COUN 565 Psychiatric Disorders
- COUN 570 Problems of Adolescence
- COUN 571 Counseling Issues for Women

Career and Life Span Development

- COUN 506 Social and Cultural Issues
- COUN 507 Career Development
- COUN 508 Developmental Psychology
- COUN 523 Industrial Rehabilitation

Counseling Systems

- COUN 503 Group Counseling and Dynamics
- COUN 532 Utilization of Community Resources
- COUN 540 Family Counseling and Therapy
- COUN 566 Behavioral Counseling
- COUN 567 Health and Behavior
- COUN 572 Techniques of Consultation

Clinical Experience

- COUN 594 Practicum in Group Counseling

Directed Study

- COUN 582 Directed Study

Total Credits for Degree: 48

Total Specified Credits: 33

Total Elective Credits: 15

+ Consult Departmental and University schedules for course projections.

An insurance fee is charged.

School Counseling

(Formerly Counselor Education)

Dr. James J. Cunningham, Director

Program Objectives

The primary objective of the School Counseling program is to prepare students for entry into secondary school counseling positions.

The School Counseling Profession

According to the American Association for Counseling and Development School, school counseling is a profession designed to facilitate self-understanding and self-development through individual and small group activities. Counseling denotes a professional relationship that involves a trained school counselor, a student, and significant others in the student's life. The focus on such relationships is on personal development and decision-making based on self-understanding and knowledge of the environment.

Services provided by the school counseling program are comprehensive and developmental in nature. The school counselor possesses knowledge and skills that enable delivery of an effective program which includes attention to cultural diversities and special needs.

Employment Opportunities

School Counseling, according to the *Occupational Outlook Handbook*, published by the U.S. Department of Labor, represents the largest specialty area in counseling. A smaller percentage of students in the program enter counseling positions in settings other than secondary schools, e.g., colleges, universities, public and private agencies and organizations.

Curriculum

The curriculum in the School Counseling program is divided into four areas or sequences: psychological and sociological foundations, counseling, consultation and research.

Students admitted after June 1, 1988, will be required to complete a total of 42 credits to qualify for the Master's Degree in School Counseling. Additionally, a student must satisfactorily complete the comprehensive examination and design an appropriate research project.

Certification and Accreditations

The School Counseling program is designed to meet the standards for certification as Secondary School Counselor established by the Pennsylvania Department of Education (P.D.E.). Upon completion of the program, and the awarding of the Master's Degree, students are eligible to receive the Education Specialist I Certificate in Secondary School Counseling. The program is competency based and designed to meet the Standards for Program Approval as outlined by P.D.E.

Certain students who already possess a master's degree may desire certification only. In those cases, their previous study and experience will be reviewed and a program of study will be recommended.

The program is also accredited by N.C.A.T.E. (National Council for Accreditation of Teacher Education Programs). Initial planning for certification by C.A.C.R.E.P. (Council for Accreditation of Counseling and Related Educational Programs) is under way.

The program is a blending of theoretical and factual knowledge and practical experience. In addition to acquiring specific competencies and skills, students are provided with opportunities for self-exploration and growth in the area of self-understanding. It is our belief that the process of facilitating growth in others can occur only when the helping professional possesses a high degree of self-awareness and a desire to explore avenues for continued growth.

Refer to General Information under the Department of Human Resources for policies and procedures applicable to all Departmental programs.



Dr. James Cunningham (center), Director of the School Counseling program meets with Dr. LeeAnn Eschbach and Dr. Edwin Herr, international authority on the counseling profession, just before Dr. Herr addresses alumni of the program.

School Counseling Curriculum

Psychological and Sociological Foundations + (Minimum 9 credits required)

COUN 507	Career Development
COUN 508	Developmental Psychology
COUN 531	Psychology of Adjustment
COUN 570	Contemporary Problems of Adolescence
COUN 571	Counseling Issues of Women
ED 501	Educational Psychology

Counseling Sequence (24 credits required)

COUN 501	Case Management and Interviewing
COUN 502	Counseling Theories
COUN 503	Group Counseling and Dynamics
COUN 504	Use of Tests in Counseling
COUN 540	Family Counseling and Therapy
COUN 592	Supervised Counseling Experience I
COUN 597	Supervised Counseling Experience II (6 credits)

Consultation Sequence (3-6 credits required)

COUN 530	Current Issues in Counseling and Guidance
COUN 532	Utilization of Community Resources
COUN 572	Techniques of Consultation

Research Sequence (3 credits required)

ED 502	Educational Research
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*Total Credits for Degree: 42**

- * The student's mentor may recommend appropriate deletions or substitutions, based on the evaluation of the student's credentials.
- + Consult Departmental and University schedules for course projections.

COURSE DESCRIPTIONS

Health Administration and Human Resources Administration

Credits

HRA 500. *Organization and Administration* (HRA 300)* 3
The planning, organizing, staffing, influencing, and controlling functions of administration.

HRA 501. *Financial Administration* (HRA 301) 3
The functions of finance including accounting conventions, capital budgeting and financing, revenue and expense budgets, cash flow and cash management.

HRA 509. *Administrative Issues* (HRA 309) 3
(Prerequisites, 24 HRA and/or HAD credits or approval by Program Director) A case study and role playing seminar in issues and problems in supervision and administration. May be graded satisfactory (pass) and unsatisfactory (fail).

HAD 510. *Health Finance* (HAD 310) 3
(Prerequisite, HRA 501) Health economics and financial aspects related to financing health services and systems.

HAD 511. *Issues in Health Administration* (HAD 311) 3
Contemporary issues in health care and health administration related to the changes in the health delivery system resulting from changes in health and hospital reimbursement system.

HAD 512. *Health Services and Systems* (HAD 312) 3
Historical development of health services and systems, health insurance, government regulation, and societal factors affecting the organization and delivery of health services.

HAD 513. *Legal Aspects of Health Care* (HAD 313) 3
Impact of legal factors affecting patient/client care and the operations and administration of health and hospital systems.

HAD 514. *Health and Hospital Administration* (HAD 314) 3
Operating and administrative issues and problems in health and hospital systems with emphasis given to hospital operation, organization, and administration.

HAD 515. *Marketing Health and Human Services* (HAD 315) 3
Principles of marketing and their application including market research, market targets, market segmentation and strategic planning as well as marketing's role in management.

HAD 516. *Long Term Care Administration* (New) 3
Operation and administration of long term care facilities. Differences between acute and long term levels of care, types of long term care facilities, and special concerns of the long term care resident.

HAD 580. *Internship in Health Administration* (New) 3
(Prerequisites, 24 HAD and/or HRA credits or approval by Program Director) A 150 clock hour placement in a health agency or organization which is completed during a regular academic session. A semester project may be required. May be graded satisfactory (pass) and unsatisfactory (fail). An insurance fee may be charged.

* course number used before Fall 1990 given in parenthesis

- HRA 520. *Managerial Leadership* (HRA 320) 3
The interaction of the manager, organization, and employee with emphasis on managerial roles and functions, motivational approaches and theories, leadership styles and behaviors, and their relationship to productivity and job satisfaction.
- HRA 521. *Motivation and Work Behavior* (HRA 321) 3
Models and theories of work motivation with their implications for managers and organizational characteristics and the design of jobs and work systems. The inter-relationships between motivation, productivity, and job satisfaction.
- HRA 522. *Program Planning and Evaluation* (HRA 322) 3
Program planning and evaluation models, strategies, and processes.
- HRA 523. *Individual Behavior in Organizations* (HRA 323) 3
Behavior of the individual with emphasis on interviewing, communications, and counseling. Personnel, counseling, and management theories are integrated into workable supervisory models and strategies.
- HRA 524. *Group Behavior in Organizations* (HRA 324) 3
An understanding of group behavior and dynamics with emphasis on group membership and leadership, team development, communications, organizational development, decision-making, and conflict resolution.
- HRA 525. *Productivity Management* (HRA 325) 3
The interface of people, technology, and systems is examined with emphasis on increasing organizational effectiveness and efficiency.
- HRA 526. *Computer Technology* (HRA 326) 3
A "hands-on" introduction to disk operating systems, word processing, and computer applications with emphasis on electronic spreadsheets and database management software. A laboratory fee is charged.
- HRA 530. *Personnel Administration* (HRA 330) 3
Personnel functions of organizations ranging from recruitment and selection to adjustment and training and the legal and regulatory environment affecting personnel operations.
- HRA 531. *Staff Development* (HRA 331) 3
Focuses on planning, implementing and evaluating staff training and development.
- HRA 532. *Labor Relations* (HRA 332) 3
Organized labor in organizations including labor relations, union security and contracts, collective bargaining, grievance processing, and third party resolution.
- HRA 533. *Compensation Systems* (New) 3
Concerns all of the ways in which organizations reimburse employees for their effort and the legal and regulatory environment affecting compensation systems.
- HRA 534. *Health, Safety, and Security* (HRA 334) 3
Deals with those organizational activities and the regulatory environment that relate to the occupational health, safety, and security of employees.
- HRA 535. *Employee Assistance Programming* (HRA 335) 3
Approaches of organizations to promote employee health and to provide assistance to employees with a variety of problems that interfere with productivity.

HRA 536. *Industrial Rehabilitation* (HRA 336) 3

Case management of the industrially injured and the physical, psychological and vocational factors affecting re-employability.

HRA 537. *Benefits Systems* (New) 3

Concerns all of the ways in which organizations reimburse employees for their effort and the legal and regulatory environment affecting benefits systems.

HRA 580. *Internship in Human Resources* (HRA 397) 3

(Prerequisites, 24 HRA and/or HAD credits or approval by Program Director) A 150 clock hour placement in a staff or administrative position which is completed during a regular academic session. A semester project may be required. May be graded satisfactory (pass) and unsatisfactory (fail). An insurance fee may be charged.

HRA 582. *Directed Study* (HRA 398) 3

Allows the student to pursue an area of interest under the guidance of a faculty person. Approval by the Program Director is required. An administrative fee is charged.

HRA 584. *Special Topics* (HRA 396) 3

Topics of current interest are offered on a variable basis including, but not restricted to, career development, stress management, and interpersonal negotiations.

***Community Counseling, Rehabilitation Counseling, and
School Counseling***

COUN 500. *Professional Issues in Counseling* (COUN 351) 3

Focuses on the underlying philosophical, historical, professional, legal, and ethical issues involved in the profession of counseling. Designed to acquaint the student with important issues in the field of professional counseling and to help the student establish a sense of professional identity.

COUN 501. *Case Management and Interviewing* (COUN 302/Ed. 242) 3

This course deals with the application of counseling theory to the practical interview situation. The counseling process and the core elements of a facilitative counseling relationship will be examined. Counselor candidates will begin to develop basic interviewing skills.

COUN 502. *Counseling Theories* (COUN 331/Ed. 240) 3

Selected theories and techniques of counseling are discussed and examined through a combination of lecture, discussion, and role-playing activities. Emphasis will be upon evaluating the various theories and abstracting parts of these theories into a comprehensive overview of the counseling process. Application to different types of clients is discussed.

COUN 503. *Group Counseling and Dynamics* (COUN 333/Ed. 241) 3

A basic understanding of group dynamics and behavior is provided. Processes and patterns of interaction are analyzed primarily from the standpoint of their broad educational significance. The selection, evaluation and use of group counseling methods and materials are discussed. Methods of developing and organizing group programs are also presented. Students also participate in a group experience.

COUN 504. *Use of Tests in Counseling* (COUN 303/Ed. 254) 3

Emphasis will be placed upon the development of competency in the evaluation, use, and interpretation of tests and inventories used in assessing abilities, achievement, interests and personality. The relationship of informal data to the analysis of individual behavior will be included. Selected instruments will be examined in terms of their design and appropriate utilization.

COUN 505. *Research in Counseling* (COUN 304/Ed. 202) 3

An introduction to research issues and methodology in the field of counseling. Emphasis is placed on gaining the knowledge necessary to evaluate the conclusions of published research.

COUN 506. *Social and Cultural Issues* (COUN 352) 3

Focuses on current social and cultural issues which shape human behavior and affect the practice of counseling. Issues such as the human liberation movement, aging, sexuality, drug abuse, unemployment, poverty, and crime are addressed.

COUN 507. *Career Development* (Ed. 246) 3

Psychological and sociological aspects of vocational choice and vocational adjustment will be presented and major theories of career choice and development will be reviewed. Emphasis will be placed upon methods and resources for facilitating career development throughout the lifespan. Career education, computerized information systems, and decision-making methods will be considered along with innovative approaches for special needs populations.

COUN 508. *Developmental Psychology* (Ed. 274) 3

This course provides an understanding of developmental psychology, including theoretical approaches and issues relating to physical, cognitive, personality and moral development with particular emphasis on implication for counselors. Both psychological and sociological impacts on development will be overviewed.

COUN 520. *Rehabilitation Services and Issues* (COUN 301) 3

Identification of the principles underlying rehabilitation, including history, philosophy, structure, and legislation. Study of the rehabilitation process from referral through follow-along activities. Concepts regarding legal issues, professional ethics, consumer advocacy, personal philosophy, community organization and the team concept are presented through a combination of guest lecturers and seminars. Field experience in supported employment with business and industry will be required.

COUN 521. *Physical Disabilities* (COUN 312) 3

Unique problems of various disability groups encountered by the counselor. Psychodynamic principles underlying personal adjustment to disability with emphasis on client needs, conflicts, and adjustment mechanisms. Environmental adjustment problems in relation to the nuclear family and community.

COUN 522. *Vocational Aspects of Disability* (COUN 321) 3

Theories and models of vocational choice, career development, vocational counseling, and selected vocational assessment measures are presented. An in-depth study of the rehabilitation problems and issues dealt with by the counselor in placing individuals with disabilities is included. Job analysis and industrial visits are required.

COUN 523. *Industrial Rehabilitation* (COUN 336) 3

Focuses on case management of the industrially injured. The physical, psychological, and vocational factors affecting employability, principles and practices of private sector rehabilitation, selective job placement and job modification techniques, and vocational testimony are discussed. Case examples are utilized.

COUN 530. *Current Issues in Counseling and Guidance* (Ed. 243) 3

This is a professional seminar wherein emphasis is placed upon the development of a sensitivity to the educational, sociological and philosophical implications of the counselor's role. This course is designed to provide for a smooth transition to the role of school counselor. Included in the course is a consideration of current ethical, legal, and professional development issues.

COUN 531. *Psychology of Adjustment* (Ed. 275) 3

This course provides an understanding of adjustive behavior, including the discrimination of normal from abnormal behavior and a thorough understanding of sources of stress and stress management. Special attention is given to adjustment problems of a variety of client populations.

COUN 532. *Utilization of Community Resources* (Ed. 242.1) 3

This course examines in detail the role of the counselor in relation to various agencies in the community. Criteria for referral and the referral process are described in-depth as are the various aspects of collaboration and cooperation between school and community. Existing community resources are examined and representatives of various agencies present information about their services.

COUN 540. *Family Counseling and Therapy* (COUN334/Ed. 242.2) 3

The systems and communications theories of family therapy will be presented with specific attention to the structural and strategic family therapy approaches. A variety of family therapy techniques and stages will be learned through the use of role play and videotaping. The utilization of family therapy in a variety of settings will be discussed.

COUN 560. *Addictive Behaviors* (COUN 311) 3

The problems of drug and alcohol dependency are examined. Treatment approaches and facilities are illustrated and discussed with guest lecturers and seminars. A field trip to a local treatment facility is required.

COUN 561. *Substance Abuse Prevention and Education* (New) 3

Design, implementation, and evaluation of substance abuse prevention and education programs.

COUN 562. *Health and Legal Aspects of Substance Abuse* (New) 3

Legal and health consequences of substance abuse. Special attention is given to the role of the substance abuse specialist in relationship to health care and legal systems.

COUN 565. *Psychiatric Disorders* (COUN 313) 3

An examination of the problems associated with mental and emotional disturbances. Emphasis is placed on contemporary modalities of treatment as they relate to community mental health programs. Critical issues in mental health including the dynamics behind these issues will be discussed.

COUN 566. *Behavioral Counseling* (COUN 332) 3

The literature on behavior modification and therapy is examined with particular emphasis on the application of techniques to varied clinical populations.

- COUN 567. *Health and Behavior*** (COUN 335) 3
 Focuses on stress, the nonspecific response of the body to any demand, which affects thoughts, emotions, and the body. Stress-induced diseases of adaptation (the psychosomatic warning signs such as hypertension, gastrointestinal disorders, and nervous disturbances) along with the stress-related thought disorders and emotional disturbances are examined.
- COUN 570. *Problems of Adolescence*** (Ed. 242.4) 3
 This course explores current concerns and challenges confronting adolescents and young adults. Topics will partially be determined by societal trends, and will cover a range of issues such as adolescent suicide, eating disorders, substance abuse and relationship conflicts. Selected issues will be explored from both a psychological and sociological perspective, with emphasis on implications for developing counselor intervention techniques.
- COUN 571. *Counseling Issues for Women*** (Ed. 242.3) 3
 A basic understanding of psychological issues currently facing women across the lifespan will be provided. Sociological concerns will be discussed as well as counselor intervention techniques.
- COUN 572. *Techniques of Consultation*** (Ed. 242.5) 3
 Selected theories of consultation and their application with a variety of consultees will be presented. A careful examination of the process of consultation will be provided as well as ample opportunity for simulations. Strategies for implementation of consultation programs will be discussed, along with the advantages and pitfalls inherent in the use of consultation.
- COUN 582. *Directed Study*** (Ed. 300) 3
 Allows the student to pursue an area of interest under the guidance of a faculty member. A fee, in addition to tuition charges, may be charged. Approval of the faculty member and Program Director is required.
- COUN 584. *Special Topics*** (Ed. 399) 3
 Selected topics of current interest in the field of counseling are offered on a variable schedule.
- COUN 590. *Practicum in Community Counseling*** (New) 3
 (Prerequisites, COUN 501, 502, 504) Focuses on necessary and desirable counseling skills, development of counseling relationships, and case conceptualization. Practical application of counseling theories and techniques, psychological testing, and vocational development theory is emphasized.
- COUN 591. *Practicum in Rehabilitation Counseling*** (New) 3
 (Prerequisites, COUN 501, 502, 504). Focuses on necessary and desirable counseling skills, development of counseling relationships, and case conceptualization. Practical application of counseling theories and techniques, psychological testing, and vocational development theory is emphasized.
- COUN 592. *Supervised Counseling Experience I*** (Ed. 244.1) 3
 This course consists of the actual counseling of clients under supervision. A variety of on-site counseling experiences are provided for the student. Required of all School Counseling students.

COUN 594. *Practicum in Group Counseling* (COUN 342) 3
(Prerequisite, COUN 503) Focuses on necessary and desirable group counseling skills, the development of group environments and the use of group techniques for generating individual change. An advanced personal group experience under direction of the faculty is an ongoing part of this practicum. Admission by consent of instructor.

COUN 595. *Internship in Community Counseling* (COUN 343) Variable: 3-6
(Prerequisite, COUN 590) Full time placement in a community agency, facility or institution involving 600 clock hours of supervised experience. These assignments may include work in mental health, drug and alcohol, family service, aging, or mental retardation facilities. A minimum of 6 credits is required of all students. Students may register for 3 or 6 credits per academic session after consultation with the Program Director. An insurance fee is charged. The Internship must coincide with academic semester.

COUN 596. *Internship in Rehabilitation Counseling* (COUN 343) Variable: 3-9
(Prerequisite, COUN 591) Full time placement in a community agency, facility or institution involving 600 clock hours of supervised experience. These assignments may include work in State-Federal rehabilitation agencies, rehabilitation centers, sheltered workshops, selected mental and retardation programs, supported employment, independent living centers and programs, drug and alcohol programs, and other systems which provide services for State-Federal programs. A minimum of 6 credits is required of all students. Selected students may earn a maximum of 9 internship credits. Students may register for 3, 6, or 9 credits per academic session after consultation with the Program Director. A project is required for all students earning a total of 9 internship credits. An insurance fee is charged. The Internship experience must coincide with academic semester.

COUN 597. *Supervised Counseling Experience II* (Ed. 244.2) 6
(Prerequisite, COUN 592) Actual counseling of clients under supervision continues in this course. A variety of on-site counseling and related experiences are provided for students.



Business Administration (MBA)

Dr. Joseph R. Zandarski, Director

Requirements

Admission

The MBA program seeks to attract students of high intellectual caliber and leadership potential, and to qualify them for management positions and/or prepare them for further study. Admission is based on the following criteria: performance on the Graduate Management Admission Test (GMAT), overall grade point average, rank in graduating class, managerial experience and other earned graduate degrees.

Applicants should have a total of at least 975 points based on the formula: $200 \times \text{the undergraduate G.P.A.} + \text{GMAT score}$. Foreign students, whose native language is not English, are required to demonstrate their proficiency in English by achieving a score of at least 500 in the TOEFL.

Application should be made one month in advance of the entering dates in September, February, and June.

Graduate Management Admissions Test

This examination is an aptitude test designed to measure certain mental abilities that have been found to be important in the study of business at the graduate level. This test is required of all students.

Application forms for the GMAT may be obtained from the Graduate School Office or by writing to the Educational Testing Service, Box 966, Princeton, New Jersey 08540. Applicants should be registered with ETS to take the exam at least four weeks prior to the testing date. The exam will be administered on this campus on the following dates: 10-20-90, 1-19-91, 3-16-91, 6-15-91.

Program of Study

The MBA curriculum is designed to offer studies in business beyond the undergraduate level and includes foundation courses, core courses and advanced electives. The MBA degree requires completion of 12 graduate courses (36 credits) for the person with all background courses already completed. Additional (foundation) courses may be required to provide appropriate background for students deficient in foundation areas.

Students may specialize in Accounting, Finance, Production and Operations Management, or Marketing, or they may choose the General Area.



Curriculum

The curriculum is designed to conform to AACSB standards. Courses are given at three levels (Foundation, Core, and Advanced Electives) in several functional areas. *Students must rigidly observe the prerequisites for each course.*

MBA students may declare a major or specialization in the following areas:

- Accounting
- Finance
- Marketing
- Production & Operations Management

A “specialization” consists of a minimum of three advanced courses (9 credits) in a functional area. An additional advanced course (3 credits) may be taken either in that same functional area or in another functional area.

The student may pursue a “double major” by taking the required number of advanced electives (3 courses, 9 credits) in each major area.

It is also possible for the student to declare for the MBA: General (i.e., no specific major), thereby maximizing flexibility in the selection of advanced electives. The student in the MBA: General program takes four advanced courses (12 credits) selected in any combination from the various functional areas.

Foundation Courses

The student must complete all of the Foundation courses listed below, in addition to the MBA courses. Foundation courses are ordinarily taken at the undergraduate level. Students with an undergraduate major in Business will ordinarily have completed all of these courses. Students with non-business undergraduate majors will have often completed at least some of the Foundation courses. Any Foundation courses required of a student will be identified in the letter of admission to the program, based on an examination of the student's transcripts.

Foundation courses may be completed either at the University of Scranton or at another accredited institution. There is no limit to the number of Foundation course credits which may be taken at another accredited institution and grades in Foundation courses do not enter into the calculation of the graduate QPI. After admission to the program, foundation and MBA courses may be taken simultaneously as long as prerequisite requirements are not being violated.

Foundation Courses

<i>Areas Covered</i>	<i>U. of S. Undergraduate Courses</i>
Financial and Managerial Accounting	Acc. 253 & 254 OR Acc. 210
Mathematics	Math 106 & Math 107 OR Qms 210
Statistics	Qms 251 & 351 OR Qms 211
Marketing	Mkt 351
Corporation Finance	Fin 351
Micro & Macro Economics	Eco 151 & 152 OR Eco. 210
Organizational Theory	Mgt 351
Business Law	Mgt 251

Computer Literacy: Additionally, many courses in the MBA program assume a knowledge of: 1) spreadsheet techniques and applications, 2) introduction to database management, and 3) introduction to VAX. Students lacking computer background should inquire into University of Scranton continuing education courses.

MBA Core Courses — 8 courses (24 credits)

Students will complete all of the MBA Core courses listed below. A student with an undergraduate major in a particular area may have the Core course requirement corresponding to that major waived. In that case, the student substitutes any elective course for the Core course which was waived.

MBA Core Courses

Acc. 502	Accounting for Management
Qms 503	Operations Management
Qms 504	Management Information Systems
Mgt. 505	Organizational Behavior
Mkt. 506	Marketing Management
Eco. 507	Managerial Economics
Fin. 508	Financial Management
Mgt. 509	Business Policy

Advanced Electives — 4 courses (12 credits)

Advanced elective or “specialization” courses are those numbered 520 and above in the listing of Course Descriptions which follows. The student must take a minimum of four advanced elective courses (12 credits), the particular selection of courses depending on the student’s area of specialization. Completion of three courses (9 credits) in one area constitutes a specialization. The Core course in a functional area must be completed before taking advanced electives in that area.

Students *must* take at least one international course among their advanced electives. Students may choose from the following:

Acc 525, Mgt 556, Mkt 563, and Fin 584

The international course may be in the student’s area of specialization or in some other area.

Transfer of Credits

A maximum of six graduate credits may be transferred to the University of Scranton. For other regulations related to the transfer of graduate credits, see page 16 of this catalog. There is no limit on the number of Foundation course credits which may be taken elsewhere.

Class Schedules

All classes are conducted in the evening. Time slots are 4:30 -7:10 and 7:20 - 10:00. Consult literature on Summer and Intersession for class times. Each course meets one night per week. Students may attend either on a part-time or full-time basis. Most part-time students take two courses each Fall and Spring term. Most full-time students take 3-4 courses each Fall and Spring term, plus 1-2 courses each Summer and Intersession term.

Most classes are conducted in the new Hyland Hall, at the corner of Jefferson and Linden Streets, directly across from O’Hara Hall.

Computer Facilities

Computing facilities available exclusively for student use include a VAX minicomputer with 40 terminals; 9 PC labs with a total of approximately 100 PC’s; sign-out software including Lotus 1-2-3, WordPerfect, dBase III Plus, WordStar, and a variety of other

packages; printers include HP Laser Jets, dot matrix, and HP plotters; standard statistical packages are available on the VAX.

For a more detailed listing of computer facilities, see page 21 of this catalog.

Graduate Assistantships

Approximately 10 graduate assistantships are available for full-time MBA students each year. The assistants may work with faculty in the School of Management, in University Computing Systems, or in the McDade Technology Center. Assistants receive a stipend plus waiver of tuition.

Course Descriptions — MBA

Foundation Courses

	<i>Credits</i>
Eco 151 & 152. <i>Principles of Econ I & II</i> (Eco 11 & 12)*	3
Determinants of aggregate economic activity, monetary and banking system, the composition and fluctuation of national income as influenced by monetary and fiscal policy; operation of the price system as it regulates production, distribution and consumption, international economics.	
Eco 210. <i>Essentials of Economic Theory</i> (Eco 101)	3
Intended to provide a foundation in economics for MBA students and for non-business students taking minor or cognate credits in business, this is an intensive course that stresses economic theory and public policy implications. The topics include stabilization of the economy; the price system as it regulates production, distribution and consumption and as it in turn is modified and influenced by private groups and government.	
Acc 253. <i>Financial Accounting</i> (Acc 3)	3
(For non-accounting majors) A survey of the topics in Acc 1 and 2. Coverage is directed toward the reporting of financial information to interested parties.	
Acc 254. <i>Managerial Accounting</i> (Acc 4)	3
(For non-accounting majors) (Prerequisite, Acc 253) Accounting techniques required in compiling and interpreting selected data for decision making. Includes such areas as cash and working capital flows, profit planning, statement analysis, capital investment decision, planning and controlling operations.	
Acc 210. <i>Survey of Managerial & Financial Accounting</i> (Acc 101)	3
Intended to provide a foundation in accounting for MBA students and for non-business students taking credits in business, this is an intensive course that covers reporting financial information and accounting techniques for decision-making, planning and controlling operations.	
Math 106 & 107. <i>Quantitative Methods I & II</i> (Math 6 & 7)	Each 3
Functions and graphs, matrix methods, differential and integral calculus including applications to management problems.	

* course number used before Fall 1990 given in parenthesis

- Qms 251. *Statistics for Business I*** (Qms 15) 3
(Prerequisite, Math 106) Detailed coverage of descriptive statistics, and introduction to the elements of Probability Theory (including Bayes' Theorem) and Decision Theory, and Index Numbers. The major discrete and continuous probability distributions are covered with an emphasis on business applications. Data analysis will be done using the compute software package MINITAB.
- Qms 351. *Introduction to Management Science*** (Qms 109) 3
(Prerequisite, Math 107 & Qms 251) A survey of the quantitative techniques which are used by modern managers. Topic coverage focuses on model building, linear programming methods, and simulation. Emphasis is placed on the use and limits of these quantitative methods.
- Qms 210. *Quantitative Methods I*** (Qms 101) 3
An introduction to various mathematical tools used in the solution of business problems. Topics include: sets, vectors, matrices, system of linear equations; function; differential calculus of single and several variables, classical optimization and integral calculus, sample space, basic probability concepts, random variables, discrete and continuous probability distributions, sampling.
- Qms 211. *Quantitative Methods II*** (Qms 102) 3
(Prerequisite, Qms 210) An analysis of how statistical and management science techniques assist in managerial decision making. Topics include: interval estimation, testing of hypothesis, simple and multiple regression models, linear programming, model formulation, problem solving, and sensitivity analysis, transportation and assignment problems.
- Mgt 351. *Organization and Management*** (Mgt 108) 3
The major concepts of managerial action dealing with planning, organizing, directing and controlling. Knowledge of these key aspects of the management process will provide the student with a framework for decision making. 3 hour lecture.
- Mkt 351. *Managerial Marketing*** (Mkt 107) 3
Managerial analysis of the marketing activities in business firms and institutions, including issues on macroenvironment, consumer behavior and international markets. Emphasis on segmenting target markets and developing marketing policies, such as product introduction, promotional campaigns, channels of distribution and pricing targets. 3 hour lecture.
- Fin 351. *Introduction to Finance*** (Fin 110) 3
(Prerequisite, Acc 252 or 254) This course introduces the business student to the field of finance. It serves as the foundation course for financial principles used in both financial management and investment courses. Topics include time value of money, risk analysis, basic operation of the capital markets, current assets and liability analysis, and introduction to the topics of capital budgeting and cost of capital calculation.
- Mgt. 251 *Legal Environment of Business*** (Mgt 9) 3
The nature, sources, formation, and applications of law. The judicial function, the court system, litigation and other methods of resolving disputes, legislative law from judicial decisions, law by administrative agencies, regulation of business activity, antitrust law, consumer protection, environment and pollution control.

M.B.A. Core Courses

	<i>Credits</i>
Eco 507. <i>Managerial Economics</i> (Eco 305) 3 (Prerequisite, Eco 151 & 152 or Eco 210) An intensive study of the problems of value and costs, including demand theory, empirical demand analysis, production theory, cost theory, linear programming applications in resource allocation and cost analysis, empirical cost analysis, market structure and pricing theory, pricing practice and the role of government in the private economy.	
Acc 502. <i>Accounting for Management</i> (Acc 325) 3 (Prerequisite, Acc 210 or Acc 254) Emphasis is placed on ways to use, analyze, and interpret accounting data in planning and controlling organizational activities. Selected techniques required for analysis and managerial decision making are introduced.	
Qms 503. <i>Operations Management</i> (Qms 341) 3 (Prerequisite, Qms 252 and Qms 351, or Qms 211) This course is designed to emphasize the strategic importance of operations management to the overall performance of the enterprise. Topics include: product and process planning and design, forecasting, facility location and layout, production staffing, job design and work measurement, capacity planning, aggregate planning, inventory management, requirements planning, operations scheduling, Just-in-time, and quality assurance.	
Qms 504. <i>Management Information System</i> (Qms 345) 3 This course introduces the student to the conceptual basis and practical design, development, implementation, and management of information systems. Topics covered include: information systems technology, analysis, design, development and management. Software packages are used to develop applications in accounting, finance, management, marketing and production. See note regarding background required on Computer Literacy on page 70.	
Mgt 505. <i>Organizational Behavior</i> (Mgt 350) 3 (Prerequisite, Mgt 351 or equivalent) A primary goal of an organization is the improved performance of individuals and work groups within the organization. Organizational behavior is the field of study that investigates and explains those concepts or theories which are vital in current management practices dealing with job performance.	
Mkt 506. <i>Marketing Management</i> (Mkt 360) 3 (Prerequisite, Mkt 351) Analysis of the conceptual and tactical mechanisms of marketing management with emphasis on how today's firms and institutions mobilize their resources to achieve market penetration, sales volume, and satisfactory profits. Marketing planning with control and implementation of strategies as major aspects of decision making. Also, exploring market opportunities and formulation of marketing policies (marketing mix) exemplified through case studies.	
Fin 508. <i>Financial Management</i> (Fin 380) 3 (Prerequisite, Fin 351) Principles of policy formation in the modern corporation; the institutions, instruments and customary procedures that influence the determination of corporate policy; and the reasons for choices in seeking solutions to specific financial problems. A case approach will be utilized to cover problems of working capital management, capital budgeting, and capital structure. Computerized approaches to financial problems will be emphasized.	

* course number used before Fall 1990 given in parenthesis

Mgt 509. Business Policy (Mgt 390) 3
 (Prerequisite: All other core courses) Starting with conceptual and institutional foundations of business, the course covers the philosophy, history and ethics of business policy, culminating the specific areas of policy, accounting, finance, marketing and management. This course should be taken in the last semester of the student's program, and only after all other core and major courses are completed.

Advanced Electives

Accounting

Acc 521. Auditing (Acc 421) 3
 (Prerequisite, Acc 502) Audit of income statement and selected balance sheet items. The audit report, internal auditing, ethics of the profession. Audit case problems. Admission with consent of instructor.

Acc 522. Federal Taxation (Acc 422) 3
 (Prerequisite, Acc 502) Corporation Income Taxes, with special emphasis on current Internal Revenue Service regulations. Partnerships included. Admission with consent of instructor.

Acc 523. Advanced Managerial Accounting (Acc 423) 3
 (Prerequisite, Acc 502) Decision models including pricing factor and product combinations. Examination of the problems of control in organization including transfer pricing and performance evaluation.

Acc 524. Advanced Financial Accounting (Acc 424) 3
 (Prerequisite, Acc 502) Critical examination of the treatment of major items in the financial statements using conventional (historical cost) accounting. Examination of selected topics including: consolidations, accounting for government and non-profit institutions.

Acc 525. International Accounting (Acc 425) 3
 (Prerequisite, Acc 502) Accounting for international business; accounting control for the multinational enterprise, global accounting theory and practice, social accounting concepts, tax aspects of foreign transactions, and international financial reporting to investors.

Acc 529. Special Topics in Accounting (Acc 429) 3

Production and Operations Management

Qms 541. Advanced Production and Operations Management (New) 3
 (Prerequisite, Qms 503) The design and modeling of production and inventory management systems. Topics include facility design, aggregate and hierarchical production planning, inventory management, and operations scheduling and analysis. Appropriate software packages will be used to provide hands on experience in designing, analyzing, and evaluating manufacturing operations.

- Qms 542. *Applied Operations Research*** (Qms 442) 3
 (Prerequisite, Qms 503) A study of how operations research models may be used to solve practical decision problems in the business sector. Techniques studied will be chosen from: linear programming, goal programming, integer programming, dynamic programming, network theory, Markov processes, queuing theory and decision analysis. The course will emphasize problem formulation, model management and interpretation; both exact and heuristic algorithms will be considered.
- Qms 543. *Applied Decision Analysis*** (Qms 443) 3
 (Prerequisite, Qms 503 or consent of instructor) An overview of decision analysis and modeling under uncertainty. Topics will include; behavioral assumptions and limitations of decision analysis, risk analysis, personal and group utility functions and their applications. Case studies of several applications illustrating different features of decision analysis will be discussed.
- Qms 544. *Business Forecasting Models*** (Qms 444) 3
 (Prerequisite, Qms 503 or consent of instructor) This course deals with the study of quantitative forecasting techniques which include exponential smoothing, classical decomposition, regression analysis and Box-Jenkins (ARIMA) methodology, as well as qualitative (judgmental) methods. The emphasis is on their practical application in various business forecasting situations. Issues important in the selection of appropriate forecasting methodology, such as data requirements, forecast accuracy, time horizon and cost are discussed.
- Qms 546. *Business Database Management Systems*** (Qms 446) 3
 (Prerequisite, Qms 504) This course focuses on the overall structure of database management applications with emphasis on the relational approach. Topics covered include: database design, data dictionaries, query system, methods of storage and access, data definition and manipulation, data security and integrity, recovery and concurrence, distributed database management. Students will learn to design and implement database applications using micro and/or mainframe computers.
- Qms 548. *Business Decision Support Systems*** (Qms 448) 3
 (Prerequisite, Qms 503 & 504) This course introduces the student to the conceptual foundations, technological components, and organizational processes involved in building interaction computer-based systems to help decision makers solve relatively unstructured problems. Topics include: Decision Support Systems, DSS, and Expert Systems (ES) Architecture, Tools for Building DSS and ES, Development of Decision Support and Expert Systems, and Applications using DSS Generators and ES Shells.
- Qms 549. *Special Topics in POM*** (Qms 449) 3
 (Prerequisite, Qms 503 & 504) Application of Quantitative methods of analysis to research problems in management, finance, marketing, production planning, and management information systems.

Management

- Mgt 553. *Organizational Theory*** (Mgt 453) 3
 (Prerequisite, Mgt 505) Study of the forces both within and outside the organization that determine the structure and processes of an organization. Topics to be covered will include technology and size influences, conflict, boundary roles, matrix structure, political factors, and sociotechnical systems.

Mgt 554. *Group Dynamics* (Mgt 454) 3
 (Prerequisite, Mgt 505) Designing individual and group behavior systems, contemporary topics on designing organizational systems for better utilization of human resources.

Mgt 555. *Organization Power & Politics* (Mgt 455) 3
 (Prerequisite, Mgt 505) This course examines power and politics in organizations from theoretical, applied, and research perspectives.

Mgt 556. *International Management* (Mgt 456) 3
 (Prerequisite, Mgt 505) A basic graduate course in international management, this course focuses on the set of strategy decisions facing the multinational corporation. It will also focus on the external and internal variables that influence the choice and outcome of strategies. The specific strategies covered are entry/ownership, sourcing, control, marketing, financial, human resources, and public affairs. Other topics include the division of labor and resource allocation on a worldwide basis, cultural issues, and issues of nationalism.

Mgt 559. *Special Topics in Management* (Mgt 459) 3

Marketing

Mkt 561 *Marketing Research* (Mkt 461) 3
 (Prerequisite, Mkt 506) Marketing Research is studied as the basis for decision making, for analysis of markets, and for evaluation of marketing strategies through systematic gathering of information and evidence. The foundations and methodology of research including behavioral sciences and multivariate analysis are discussed. Research projects are conducted by the class participants and research applications to marketing problems are exemplified.

Mkt 562. *Promotion Management: Advertising and Selling* (Mkt 462) 3
 (Prerequisite, Mkt 506) A study of the promotion activities of business firms and institutions; analysis of audience behavior and motivation; communication through mass media and person to person interaction including advertising, personal selling, sales promotion, and publicity; the development of an integrated promotional strategy to generate sales and profits through informing, persuading, and activating middlemen and consumers.

Mkt 563. *International Marketing* (Mkt 463) 3
 (Prerequisite, Mkt 506) A study of the managerial problems in international marketing covering factors affecting international markets in different cultural areas of the world.

Mkt 564. *Consumer Behavior* (Mkt 464) 3
 (Prerequisite, Mkt 506) Study of the basic factors influencing consumer behavior with emphasis on managerial use of consumer decision making models from both economics and the social sciences.

Mkt 569. *Special Topics in Marketing* (Mkt 469) 3

Finance

- Fin 581. *Financial Institutions* (Fin 481) 3
(Prerequisite, Fin 508) A detailed survey of the more important financial institutions of the United States in order to determine their functions and interrelations in the national economy. Monetary and fiscal policy. Material covered will assist the student to better understand the economic, social and political scene in America.
- Fin 582. *Advanced Financial Management* (Fin 482) 3
(Prerequisite, Fin 508) A case oriented approach to financial decision making with emphasis on current management, capital budgeting, capital structure, mergers and bankruptcy.
- Fin 583. *Investment Analysis* (Fin 483) 3
(Prerequisite, Fin 508) The investment markets and financial analysis of various types of investments including industrial, railroad, utility financial institutions, real estate, government, municipal and foreign securities; the mathematics and mechanics of investments.
- Fin 584. *International Finance* (Fin 484) 3
(Prerequisite, Fin 508) A detailed survey of the financial decision process of multinational corporations. Topics include, foreign exchange risks, foreign investment decisions, positioning of funds, international banking, import and export financing, multinational accounting rules and tax planning.
- Fin 589. *Special Topics in Finance* (Fin 489) 3



*Dr. Gerald Biberman,
Associate Professor of Management,
specializes in
organization behavior.*

Department of English

Dr. Francis X. Jordan, Chair and Director of Graduate Program

Departmental Requirements

The applicant must, prior to the start of his/her graduate program, possess a baccalaureate degree; and must have completed on the undergraduate upper-division level a minimum of eighteen semester hours in English; and must, further, have a quality point index of not less than 2.75 (of a possible 4.0) in his/her upper-division courses in English. Applicants are urged to submit scores from the GRE General Test and Subject Test in Literature. For certain applicants, the Director of the Graduate Program in English may require submission of these scores. International students must have a score of at least 550 on the TOEFL.

Master of Arts in English

Candidates for the degree of Master of Arts in English may select a thesis or non-thesis program.

M.A. Thesis Program The M.A. thesis program will require the student to complete successfully 27 credits in courses in English, as outlined below; pass an oral exam; and present a critical study (thesis) of no fewer than 12,000 words. The comprehensive examination for the M.A. (thesis) will be an oral examination, in which the candidate will defend his/her thesis and be questioned on literary material from the area of his/her thesis and two other major areas of English or American literature. The specific areas for each student's oral examination will be established by the student and his/her mentor, based on the thesis topic. A summary description of the procedure to be followed in the preparation and defense of theses can be obtained from the secretary of the English Department (Room T458).

The only specific course requirement for the M.A. (thesis and non-thesis) is English 500: Introduction to Research (three credits). The remaining 24 hours of credit for the M.A. (thesis) are to be taken in courses approved by the student's mentor. These courses should be so chosen as to combine student interest in certain periods and genres, and coverage, both in range and depth, of the fields of British and American literature. The 33 credit hours necessary for the M.A. (thesis) are completed with the six hours granted for the thesis.

M.A. Non-Thesis Program The M.A. non-thesis program requires the student to complete successfully 33 credits in courses in English, including English 500, and pass a written comprehensive examination.

The examination, which is given several times a year, as scheduled by the Graduate Office, will be based on a reading list of works selected from the major areas of British and American literature. The questions require students to demonstrate their knowledge of those works, as well as the literary history of which they are a part and the characteristics of the genres they exemplify. There are several such lists, and each one is the basis for several examinations. The lists and the tests are rotated regularly. Students should ask the Department Chair for a reading list after they have completed nine credits of graduate study, and begin then to prepare for the comprehensive examination. They should apply at the Graduate Office to take that examination sometime during the year in which they expect to complete their degree requirements.

Master of Science in Secondary Education: English

For a Master of Science in Secondary Education with specialization in English, kindly refer to the criteria outlined by the Department of Education, Secondary Education for application procedures and degree requirements.



Dr. William Rakauskas, Professor of English, specializes in methods of teaching English and writing.

Course Descriptions — English

Credits

- Engl 500. *Introduction to Research* (Engl 200)* 3
 Course familiarizes students with the important research tools and methods of the discipline, as well as with more specialized references and procedures in the students' particular areas and periods of interest. Reading and projects prepare students for large research projects, including the M.A. thesis and doctoral dissertation.
- Engl 501. *History of the English Language* (Engl 201) 3
 An investigation of the principal phonemic, morphological, and orthographic changes governing the evolution of the English language from Anglo-Saxon times to the present; although the approach will be historical, due emphasis will be accorded the study of our language as a living cultural entity.
- Engl 505. *Modern Grammar in the English Curriculum* (Engl 205) 3
 The theory of transformational grammar, studied against such other theories as prescriptivism, structuralism and case grammar, in practical application to the high school and college English curriculum.
- Engl 506. *Composition in the English Curriculum* (Engl 206) 3
 Designed for both high school and junior college English teachers, this course will review traditional composition programs and approaches, explore innovative programs and methods, and consider the place of composition in a variety of curricula.
- Engl 507. *Literature in the English Curriculum* (Engl 207) 3
 In considering strategies for selecting, organizing, and teaching high school literature, this course will explore the central question of what a sequential, well-balanced, efficient program in literature should consist of. It will include adolescent literature, themes, genres, socio-political movements, thematic and short courses, autotutorial devices or systems, and inquiry methods.
- Engl 511. *Medieval English Literature* (Engl 211) 3
 A critical study of the major literary works in English of the Middle Ages, from *Beowulf* through *Everyman*.
- Engl 514. *Chaucer I: The Early Poems* (Engl 214) 3
 Close study of Chaucer's poetry other than *The Canterbury Tales* with particular emphasis on *Troilus and Criseyde*.
- Engl 515. *Chaucer II: The Canterbury Tales* (Engl 215) 3
 A detailed examination of the general structure of *The Canterbury Tales* and of the individual tales, with attention to specialized critical tools and techniques, and to various critical approaches to Chaucer.
- Engl 520. *Shakespeare and Other Elizabethan Dramatists I* (Engl 220) 3
 A careful study of Shakespeare's plays written before 1600, together with selected plays of Marlowe, Kyd, Greene, and Peele.

* course number used before Fall 1990 given in parenthesis

Engl 521. *Shakespeare and Other Elizabethan Dramatists II* (Engl 221) 3

A careful study of Shakespeare's plays written after 1600, together with selected plays by Jonson, Chapman, Dekker, Beaumont, Fletcher, Tourneur, Marston, Middleton, Massinger, and Ford.

Engl 531. *Sixteenth Century Literature* (Engl 231) 3

Poetry and prose of the English Renaissance, with special attention to the new birth of poetic form; examination in depth of the great poetic achievements of Sidney, Spenser, and Shakespeare.

Engl 532. *Seventeenth Century Literature* (Engl 232) 3

A study in depth of the major British authors of the seventeenth century other than Milton.

Engl 534. *Milton* (Engl 234) 3

An appreciation of John Milton as poet, critic, and innovator, together with a critical survey of the poet's sources, poetical works, and literary forms.

Engl 536. *Augustan Studies* (Engl 236) 3

A study in depth of the major works of John Dryden, Alexander Pope, Jonathan Swift, Joseph Addison, Richard Steele, and William Congreve.



- Engl 538. *Dr. Johnson and His Age* (Engl 238) 3
The works of Johnson and his contemporaries studied in the light of the social, political, and intellectual background of the second half of the eighteenth century.
- Engl 539. *The English Novel, Defoe through Austen* (Engl 239) 3
Readings of selected novels of the eighteenth and early nineteenth centuries, with emphasis on the literary, social, and intellectual sources of the novel.
- Engl 540. *Romantic Poetry and Criticism* (Engl 240) 3
An examination of the poetry and critical writings of the major romantic poets. The aim is not an exhaustive survey but an intensive study of several of the following: Blake, Wordsworth, Coleridge, Byron, Shelley, Keats.
- Engl 543. *Victorian Poetry and Non-Fictional Prose* (Engl 243) 3
An examination of Victorian poetry and non-fictional prose in the light of its social, political, and intellectual backgrounds. The aim is not an exhaustive survey but an intensive study of several of the following: Tennyson, Browning, Arnold, and Pre-Raphaelites, Carlyle, Newman, Ruskin and Pater.
- Engl 544. *The English Novel, Dickens through Hardy* (Engl 244) 3
Readings in selected Victorian novels in the light of the social, political, and intellectual backgrounds of the age, with emphasis on the artistic development of the novel.
- Engl 550. *Studies in Modern Poetry* (Engl 250) 3
An intensive study of trends and techniques in such major twentieth century poets as Hopkins, Yeats, Auden, Dylan Thomas, Frost, Stevens and Eliot.
- Engl 552. *Modern British Fiction* (Engl 252) 3
Readings of selected twentieth century novels in the light of the social, political, and intellectual background of the times. Such major British novelists of the century as Conrad, Joyce, D.H. Lawrence, E.M. Forster, Greene, Waugh, Virginia Woolf, and Muriel Spark will be included.
- Engl 554. *Modern Drama* (Engl 254) 3
The development of drama (Continental, British, Irish, and American) from Ibsen to the present day. Among playwrights whose works will be read and studied are: Ibsen, Strindberg, Chekhov, Synge, Yeats, O'Casey, Shaw, Osborne, Pinter, Brecht, Anouilh, Ionesco, Beckett, O'Neil, Anderson, Wilder, Inge, and Albee.
- Engl 556. *American Romanticism and Transcendentalism* (Engl 256) 3
Studies in the major works of Cooper, Poe, Hawthorne, Emerson, and Melville.
- Engl 557. *American Realism and Naturalism* (Engl 257) 3
Studies in the major works of Twain, Crane, Norris, James, and Howells.
- Engl 559. *Twentieth Century American Fiction* (Engl 259) 3
Modern American novels and short stories. The period from 1900 to the present will be covered, emphasizing such major figures as Fitzgerald, Hemingway, Faulkner, Steinbeck, and Barth.

(N.B. Each of the following seminars will involve concentrated study of a single literary figure, movement, or genre. The particular subject of each seminar will vary each year.)

Engl 570. *Seminar: Special Studies in English Literature* (Engl 270) 3

Engl 571. *Seminar: Special Studies in American Literature* (Engl 271) 3

Engl 572. *Seminar: Special Studies in Comparative Literature* (Engl 272) 3

English 580. *Afro-American Literature* (Engl 280) 3

An introductory survey of Afro-American literature, stressing an in-depth examination of the works of Afro-Americans in poetry, song, drama, the novel, the essay, and the slave narrative. Emphasis will be placed on the relationship between the Afro-American experience and the African experience. The period covered is from the founding of the American nation to the present day.

Engl 598. *Directed Study* (New) 3

Engl 599. *English: Thesis* (Engl 299) 3

Students working on a thesis register for this course. Six thesis credits are normally required for MA students. These may be taken all in one term or in two different terms.

A tentative cycle indicating when courses will be offered is available from the Department. Please see the chair. Special Note on American Literature: In addition to the fixed, regularly cycled courses in American Literature (Engl 556, 557, 559) several other electives in American Literature are offered every year under the variable topic heading Engl 571 (Seminar: Special Studies in American Literature). Also, sections of Engl 550 and 554 deal with American Literature.



The oldest and youngest graduates in the Graduate School's class of 1990: 74 year old **Hannah Marguiles** (MA, English) and 21 year old **Helen Beighley** (MA, History) are congratulated by Dean Hogan.

Department of History

Dr. Michael D. DeMichele, Chair
Dr. Ray Champagne, Director of Graduate Program

Departmental Requirements

The applicant must possess the baccalaureate degree and should as an undergraduate have completed a minimum of 18 upper-division semester hours in History. Applicants should have a Quality Point Index of not less than 2.75 (based on 4.0 scale) in all his/her undergraduate history courses or have attained an acceptable score on the General Test of the G.R.E. or an equivalent score in other nationally recognized tests. In the event that significant gaps occur in the student's undergraduate program, additional undergraduate history courses may be specified by the mentor.

Master Of Arts In History

Course Requirements: The Master of Arts in History requires successful completion of 30 graduate credits.

A Thesis or Non-Thesis Program: A thesis or non-thesis program for the M.A. degree is the option of the student. Both the thesis and non-thesis programs entail successful completion of 30 graduate credits, and a successful comprehensive examination in the field. The thesis program, however, will require the student to complete successfully a total of 27 course credits and to present an acceptable thesis for which three credits will be granted. The thesis topic must be approved by the student's mentor under whose active direction the thesis shall be satisfactorily completed. The thesis must be approved by a faculty panel assigned by the Chair of the Department.

Comprehensive Examination: All candidates for the comprehensive examination in History must have the approval of the mentor, and have completed at least 24 graduate credits in the program. Ordinarily, the comprehensive examination will be a written three hour exam. The exam will be designed and graded by the student's mentor and a faculty panel to test the student's knowledge of the factual and interpretive material basic to the student's field. It will not be limited to the content material treated in the course work.

Mentor: Upon admission to the Graduate School in History, the student will be assigned a mentor who will advise the student of all course work and who, if the program includes a thesis, will direct the student's research and writing of the thesis.

Four Year B.A./M.A. Degree Program

The Department of History and Political Science offers a special program that enables the qualified student to obtain both a Bachelor's and Master's Degree within four calendar years by accelerating the student's course of study through judicious use of Intersession and Summer School, and by allowing twelve (12) graduate history credits to be applied to both the B.A. and M.A. degree programs. Students may be conditionally admitted to the program upon matriculation at the University and after approval by the Department and the Deans of the College of Arts and Sciences and the Graduate School. Students already enrolled at the University and transfer students may enter the program on a conditional basis up to the end of the second year of studies with the same approval mentioned above.

Ordinarily, a student must have a Quality Point Index (QPI) of 3.2 in all courses and have a letter of recommendation from one of his/her history professors in order to be admitted to the four year B.A./M.A. program.

Students enrolled in the four year B.A./M.A. Degree Program are required to complete all other degree requirements specified in the catalogs of both the College of Arts and Sciences and the Graduate School of the University of Scranton.



*Dr. Michael DeMichele, Chairman
Department of History*

Course Descriptions — History

		<i>Credits</i>
Hist. 500. <i>Science and Methods of Historians</i>	(Hist. 200)*	3
A study of application of scientific methodology required for gathering, assessing, synthesizing and documenting historical information with special attention given to American historians and historiography.		
Hist. 505. <i>America: From Province to Nation</i>	(Hist. 205)	3
An examination of selected topics pertaining to the political, diplomatic and social history of the American colonies.		
Hist. 510. <i>The Shaping of the American Nation</i>	(Hist. 210)	3
An examination of selected topics in the period from the adoption of the Federal Constitution to the retirement of Andrew Jackson.		
Hist. 512. <i>The American Constitution</i>	(Hist. 212)	3
Emphasis on the basics of American constitutionalism, the development of the judicial process, the problems of civil liberties and religious freedom.		
Hist. 515. <i>America's Immigration Experience</i>	(Hist. 215)	3
An in-depth look at the immigration and Americanization of selected ethnic groups in U.S. Society.		
Hist. 518. <i>The Local Ethnic Experience</i>	(Hist. 218)	3
Immigration to America, early ethnic groups in Northeastern Pennsylvania, coal mining in the anthracite belt.		
Hist. 520. <i>American Expansionism</i>	(Hist. 220)	3
A study of the expansionist instinct in U.S. foreign policy from the Revolutionary days to modern times.		
Hist. 525. <i>American Foreign Policy in the Nuclear Age</i>	(Hist. 225)	3
Cold War diplomacy since 1945 vis-a-vis the USSR and China; managing the Japanese and European relationship; Middle East and Latin American conflicts.		
Hist. 530. <i>America's Response to Industrialism</i>	(Hist. 230)	3
A study of the Civil War and Reconstruction, industrial growth and conflict, the American Black, the reform impulses and the transformation of national politics: Bryan, Roosevelt and Wilson.		
Hist. 535. <i>Twentieth Century America</i>	(Hist. 235)	3
A study of the Great War, the Twenties, the Depression, World War II, the Cold War, and the emergence and erosion of national consensus.		
Hist. 540. <i>American Decorative Arts</i>	(Hist. 240)	3
A study of the social and domestic history of the American people from the colonial era to the Twentieth Century through an examination of how Americans developed living patterns and artistic ambience.		
Hist. 545. <i>Pivotal Elections in American History</i>	(Hist. 245)	3
An examination of the more significant and interesting Presidential elections in the history of the United States.		

* course number used before Fall 1990 given in parenthesis

- Hist. 548. *Seminar in American History* (Hist. 248) 3
An analysis of selected topics in American history from the Colonial era to the present.
- Hist. 550. *The British Experience* (Hist. 250) 3
A study and interpretation of the enduring political, cultural, and social heritage of Britain from the Age of Victoria to the end of the Empire.
- Hist. 555. *The Soviet Achievement* (Hist. 255) 3
An analysis of the social, cultural, economic and political accomplishments of the U.S.S.R.
- Hist. 560. *Modern Germany* (Hist. 260) 3
A detailed study of modern Germany from the formation of the German Empire to the demise of Adolph Hitler and the reconstruction of Germany after World War II.
- Hist. 565. *French Revolution and Napoleon* (Hist. 265) 3
A study of the causes and results of the French Revolution and the Age of Napoleon and its legacy.
- Hist. 570. *Anatomy of Modern Europe* (Hist. 270) 3
An analysis of the major institutions, problems and accomplishments of Europe since the end of World War II.
- Hist. 575. *Military Power in the 20th Century* (Hist. 275) 3
A study of the role of military force in international relations and the impact of the military and war upon domestic society in modern times.
- Hist. 578. *Seminar in European History* (Hist. 278) 3
An analysis of selected topics in European History from the nineteenth century to the present.
- Hist. 598. *Directed Study* (Hist. 298) 3
Allows the student to pursue a topic of special interest under the direction of a faculty member.
- Hist. 599. *History: Thesis* (Hist. 299) 3
Students working on a thesis register for this course.



Department of Chemistry

Dr. Maurice I. Hart, Chair

Dr. Joseph H. Dreisbach, Director of Graduate Programs

Chemistry and Biochemistry Programs

Master of Arts programs are offered in two major fields: Chemistry and Biochemistry. The Master of Arts is a thesis degree that is directed toward subsequent work for the doctoral degree and an important preparation for research activity in industry or elsewhere. Its requirements include thirty credit hours of classroom courses and independent research under the direction of a faculty member.

Master of Science programs are offered in Chemistry and Biochemistry. The Master of Science is usually a terminal degree intended to upgrade the student's professional competency and capabilities for work in industry or secondary education. Thirty credit hours of classroom work are required.

Students may also pursue a Master's degree in Secondary Education that is correlated with Chemistry. Kindly refer to the criteria outlined by the Department of Education, Secondary Education for application procedures and degree requirements.

Admission Requirements. Applicants for the Master of Arts or Master of Science programs in chemistry or biochemistry must possess, or be in close proximity to possessing, a baccalaureate degree which includes full-year courses in General and Analytical Chemistry, Organic Chemistry, Physical or Biophysical Chemistry, General Physics and Mathematics through Integral Calculus. Applicants for the Master's degree in Secondary Education that is correlated with Chemistry must have, beside the baccalaureate degree, at least a full year of General and Analytical Chemistry, College Physics and Mathematics. A Grade Point Average of 2.75 is required both overall and in the science courses.

Certain of these requirements may be waived at the discretion of the Department Chair. Students with limited undergraduate course deficiencies may be admitted with the approval of the Chemistry Faculty on condition that such deficiencies are corrected concurrently with their initial graduate course.

Course Requirements: Core courses are those, within each program, that are required of all candidates. Since these are the fundamental courses that form the basis of the comprehensive examinations, it is essential that they be taken first in any candidate's program before any electives.

Core courses for the Master of Arts and Master of Science degrees in Chemistry are as follows: Chem. 530, 531, 540, 562, 563, 570 and 571. The Chem. 571 requirement will be waived for those individuals who have previously taken an equivalent instrumental analysis laboratory course.

Core courses for the Master of Arts and Master of Science degrees in Biochemistry are as follows: Chem. 531, 550, 551, 563, 570 and 571. The Chem. 571 requirement will be waived for those individuals who have previously taken an equivalent instrumental analysis laboratory course. With permission, Chem. 560-561 may be substituted for Chem. 563 for those with a less complete background.

Core courses for the Master's degree in Secondary Education that is correlated with Chemistry are Chem. 531, 540, 560, 561, and 570.

Elective courses beyond the Core courses will be chosen from among the graduate courses offered by the Chemistry Department. In the Master's degree program in Secondary Education that is correlated with Chemistry, the mentor may allow students to fulfill their requirements with other courses in Chemistry.

Clinical Chemistry Program

The Clinical Chemistry program is designed to provide advanced scientific and management training to prepare participants for leadership positions in hospital, industrial, or other private analytical laboratories. The program has two tracks: Research and Administration. The Research track is designed for students who wish to emphasize development of research capabilities. This track requires completion of a research thesis and leads to the Master of Arts degree. The Administration track is designed for students who wish to combine their scientific training with some exposure to matters of administration in health/medical/laboratory environments; this track leads to the Master of Science degree. Both tracks require a minimum of 36 graduate credits.

Admission Requirements: Applicants for the program will normally have a Bachelor's degree in Chemistry, Biochemistry, Biology, or Medical Technology. Other undergraduate degrees may be acceptable if appropriate background courses in the sciences have been taken. The undergraduate transcripts of all applicants will be examined to determine if there are any deficiencies in background courses.

An undergraduate GPA of at least 2.75, for all courses combined as well as for science courses, is expected for admission to the program.

Course Requirements. The following courses, 27 credits in all, are required of all students in the Clinical Chemistry program:

- Chem. 531 Mechanistic Organic Chemistry
- Chem. 550 Biochemistry I
- Chem. 551 Biochemistry II
- Chem. 554 Biochemistry of Disease
- Chem. 555 Chemical Toxicology
- Chem. 556 Clinical Quality Control
- Chem. 565 Instrumental Electronics
- Chem. 570 Advanced Analytical Chemistry
- Chem. 571 Analytical Methods

While registered for Chem. 556, the student will participate in a clinical affiliation. This course will ordinarily be taken as the last course in the student's program.

Students take 9 elective credits. Electives may be taken from any of the following categories:

Thesis: Students in the Research track will take 2-6 credits of thesis work (Chem. 599). The number of thesis credits will be determined in consultation with the student's Mentor, depending on the scope of the thesis project. Normally, six thesis credits are devoted to the project.

Students in the Administration track should take HRA 500, Organization and Administration, plus two other courses from among the following Health Administration (HAD) or Human Resources Administration (HRA) programs:

- HAD 511 Issues in Health Administration
- HAD 513 Legal Aspects of Health Care
- HAD 514 Health and Hospital Administration
- HRA 520 Managerial Leadership
- HRA 521 Motivation and Work Behavior
- HRA 531 Staff Development
- HRA 534 Health, Safety, and Security

Students should consult with the Director of the HRA program, as well as with their Mentor, regarding specifics of these courses.

Other Chemistry Courses: Students may select other graduate courses offered by the Chemistry Department, in consultation with their Mentor, to complete their electives. Of special interest in this category are the following: Chem. 553, Enzymology and Chem. 572, Applied Spectroscopy.

Comprehensive Examinations

Candidates for the MA or MS degrees in Chemistry, Biochemistry, and Clinical Chemistry must pass a comprehensive examination, based on the Core courses required in the respective programs. The comprehensive examination is normally taken after the core courses have been completed. Students who do not pass the

comprehensive exam on the first attempt will be allowed to take the entire examination a second time. Students failing the comprehensive exam for the second time will not be considered for the degree.

Thesis

Master of Arts candidates in Chemistry, Biochemistry, and Clinical Chemistry are required to do independent research and write a thesis.

Early in the program, each student should choose a research director, decide with him/her on a project. Then two readers should be chosen and a proposal prepared for the research project. This proposal should be presented to the thesis committee consisting of the research director and the two readers. When the project proposal is approved the student should progressively carry out the necessary laboratory experimentation. When the work is complete, it must be reported in a thesis which is publicly defended before the Chemistry Department. The credits awarded for the thesis (Chem. 599) can vary from 2 to 6, depending on the needs of the student.

Graduate Assistantships

Each year approximately 20 students in the Department of Chemistry hold graduate assistantships. Teaching fellowships are available in the Department of Chemistry. Fellows, who are and must remain M.A. candidates, are responsible for four three-hour undergraduate laboratory sections a week during the two regular semesters. Assistants receive a stipend and waiver of tuition and some fees. Graduate students in the Chemistry Department are also eligible for graduate assistantships in other departments of the University, e.g., in Biology, Academic Computer Center, etc. Application for all assistantships must be made to the Graduate School of the University. Contact the Graduate School for information about current stipend levels.



Course Descriptions — Chemistry

	<i>Credits</i>
Chem. 530. <i>Structural Organic Chemistry; Woodward-Hofmann Theory</i> (Chem. 221)*	3
A discussion on an advanced level of the most important features of structural theory, such as stereochemistry, aromaticity, resonance and modern methods of structural determination. Applications of Woodward-Hofmann theory are also discussed.	
Chem. 531. <i>Mechanistic Organic Chemistry</i> (Chem. 222)	3
A consideration of the most important means of determining the detailed pathways of organic reactions. Substituent effects on rates of reactions are discussed. Mechanisms proceeding via polar, nonpolar and radical intermediates, including some biochemical reactions, are considered.	
Chem. 532. <i>Theoretical Organic Chemistry</i> (Chem. 223)	3
(Prerequisite, Chem. 531) A study of methodology of determining the relationship of structure to reactivity, the mechanisms of important reaction types and the factors that can influence rates and pathways.	
Chem. 533. <i>Heterocyclic Chemistry</i> (Chem. 224)	3
(Prerequisite, Chem. 531) An introductory survey of the structure and reactivity of important types of heterocyclic compounds.	
Chem. 540. <i>Advanced Inorganic Chemistry</i> (Chem. 202)	3
Theoretical concepts and their application to the reactions and structure of inorganic compounds. Introduction to coordination chemistry. Coordination chemistry and related topics; physical methods, reaction mechanisms.	
Chem. 550. <i>Biochemistry I</i> (Chem. 233)	3
Survey of the structure and function of biological macromolecules including proteins, carbohydrates, lipids, and nucleic acids. Introduction to chemical aspects of molecular biology, including DNA replication, gene regulation and protein synthesis.	
Chem. 551. <i>Biochemistry II</i> (Chem. 234)	3
A study of the metabolism of carbohydrates, lipids, proteins and nucleic acids. Introduction to enzyme kinetics and enzyme mechanisms.	
Chem. 552. <i>Biochemical Genetics</i> (Chem. 236)	3
Chemical aspects of cell biology and genetics. Topics include an introduction to the theories of heredity, structure of DNA and RNA, DNA replication, prokaryotic and eukaryotic gene regulation, translation and DNA technology.	
Chem. 553. <i>Enzymology</i> (Chem. 237)	3
A course on the chemical nature of enzymes with relation to mechanisms of enzyme action and kinetics. Purification and identification of enzymes and isozymes. Biochemical and physiological aspects of enzymes in living systems.	
Chem. 554. <i>Biochemistry of Disease</i> (Chem. 267)	3
A molecular description of pathological conditions in humans. Emphasis is placed on the effects of various disease states on metabolism. Diagnostic techniques and therapeutic approaches are also discussed.	

* course number used before Fall 1990 given in parenthesis

- Chem. 555. *Chemical Toxicology* (Chem. 225) 3
The nature, mode of action and methods of counteracting substances which have an adverse effect on biological systems, especially human. Medical, industrial, environmental and forensic aspects will be discussed.
- Chem. 556. *Clinical Quality Control* (Chem. 268) 3
A study of the design and operation of a quality control program in a clinical laboratory. The course will include all those actions necessary to provide adequate confidence that test results satisfy given requirements and standards. Such areas as statistics, patient preparation, specimen integrity, external proficiency control, internal quality control, analytical goals and laboratory management will be covered.
- Chem. 560-561. *Intermediate Physical Chemistry* (Chem. 245-246) Each 3
A review of the fundamentals of chemical principles, and a treatment of the mathematics requisite for such review. Two semesters.
- Chem. 562. *Advanced Physical Chemistry I* (Chem. 241) 3
Quantum mechanics and quantum chemistry, including perturbational theory, variational theory and specific applications of molecular orbital theories to organic molecules. Spectroscopic applications.
- Chem. 563. *Advanced Physical Chemistry II* (Chem. 242) 3
A comprehensive treatment of thermodynamics, including electrochemistry, thermochemistry and chemical equilibrium. Some introduction to the concepts of statistical mechanics and their application to thermodynamics will also be given.
- Chem. 564. *Polymer Chemistry* (Chem. 261) 3
Introduction to the physico-chemical aspects of polymers; emphasis on structure, properties and application; thermodynamics of polymer solutions; statistical mechanical consideration of polymers, theories of rubber elasticity.
- Chem. 565. *Instrumental Electronics* (Chem. 266) 3
An introduction to analog and digital electronics and microcomputers involved in computer automated laboratory instrumentation, including programming and interfacing required for laboratory data acquisition and control.
- Chem. 570. *Advanced Analytical Chemistry* (Chem. 211) 3
Theory, description, and application of modern analytical techniques with emphasis on spectroscopy, potentiometry, chromatography, electrochemistry, and radiochemistry.
- Chem. 571. *Analytical Methods* (Chem. 218) 3
Laboratory practice with special and analytical apparatus and methods used for process and control, and for research. (Lab fee: \$40/cr.)
- Chem. 572. *Applied Spectroscopy* (Chem. 214) 3
The use of ultraviolet, visible spectroscopy, infrared spectroscopy, nuclear magnetic resonance spectroscopy and mass spectroscopy as tools for the identification of organic compounds. The course will include laboratory work using these instruments.
- Chem. 573. *Electro-Analytic Chemistry* (Chem. 213) 3
Theory and application of potentiometry, polarography, amperometry, coulometry, and other analytical methods.

Chem. 584. *Special Topics*

(Chem. 298) Variable

Current topics in chemistry, biochemistry, or clinical chemistry offered by members of the Department.

Chem. 590. *Seminar*

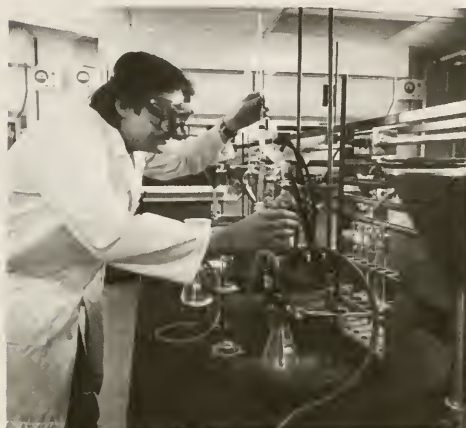
(Chem. 251) 1

Current topics in chemistry and biochemistry are prepared and presented by the students.

Chem. 599. *M.A. Thesis*

(Chem. 299) 2-6

(Lab fee charged — \$40.00 per credit).



Loyola Hall of Science, home of the Chemistry Department.

Software Engineering

Dr. J. Fernando Naveda, Director

Program Description and Requirements

Software engineering deals with the application of principles to the analysis, design, construction, and maintenance of computer software and its documentation. This master's degree program seeks to develop professionals who are knowledgeable about and skilled in the application of those principles. Software engineering is a relatively new field within the computing sciences, but one that is viewed as a crucial evolution as software proliferates and organizations become increasingly dependent on software both for routine operations and new developments.

The master of science in software engineering (MSSE) program requires 36 graduate credits, divided as follows:

Fundamentals — 4 courses, 12 credits:

SE 500, 501, 504, and 507

Advanced courses — 6 courses, 18 credits:

SE 510, 524, plus four elective courses

Thesis project — 2 courses, 6 credits:

SE 598, 599

Certain undergraduate background courses may also be required, depending on the student's previous training. See Admission Requirements (item 4) below for a description of the required background for the program.

Admission Requirements

The following are the normal admission requirements for the program. In making an admission decision, all of the information about an applicant will be viewed *in combination*. No single factor among those listed below will either qualify or disqualify an individual for admission to the program.

1. A bachelor's degree from an accredited institution with a minimum grade average of 3.0 (based on a scale of 4.0). Official transcripts of previous academic work must be submitted. A bachelor's degree in computer science is preferred, but not required. At least one year's experience in software development is highly desirable.

2. Scores from either the Graduate Management Admissions Test (GMAT) or Graduate Record Examination (GRE): General Test must be submitted. Information regarding when these tests are administered may be obtained from the Graduate Office. Generally the test must be taken no later than January in order to meet the March 1 application deadline.
3. Three letters of recommendation from professionals familiar with the software development work of the candidate. Letters from current and former professors who can comment on the candidate's technical expertise are acceptable.
4. Demonstratable knowledge equivalent to undergraduate courses in:
 - a. Structured programming in a block structured language (Ada, Pascal, . . .).
 - b. Machine organization and assembler programming.
 - c. Discrete mathematics.
 - d. Data structures.
 - e. File Processing.

Students lacking such background but otherwise highly qualified for admission may be admitted on condition that certain undergraduate courses in the above areas be completed.

5. Good English language skills (oral and written). A TOEFL score of 550 is required for international students who do not speak English as their native language.
6. Submission of a three or four page essay on a software development or maintenance project in which the applicant has participated, an expository survey of a technical subject, or a report on a particular software tool or method. The report or essay must be authored solely by the applicant and be reasonably current.
7. A one or two paragraph statement of objectives and expectations in enrolling in the program. Items 6 and 7 should be submitted along with the Application for Admission to the program.
8. Students will be admitted only for entrance in the Fall term. (All application materials, as specified above, should be in the Graduate Office by March 1 preceding the Fall term in which the student wishes to begin study.)

Note: The Software Engineering program begins in Fall, 1990. During the Fall and Spring terms of the 1990-91 academic year, a maximum of 6 graduate credits per term may be taken in the program (SE 500 and 501 in Fall, SE 504 and 507 in Spring).

Course Descriptions — Software Engineering

Credits

SE 500. *Introduction to Software Engineering*

3

(Prerequisite, admission to the program) This course introduces the student to Software Engineering and formal foundations. Terminology and definitions are introduced. Topics include an overview of Software Engineering, mathematical foundations of software engineering, set theory, predicate calculus, first and second order logic, temporal logic, finite state machines, etc.

SE 501. *Advanced Data Structures and Algorithms*

3

(Prerequisite, admission to the program) Introduction to the programming environment that will be used throughout the entire program. Review of common data structures: stacks, queues, linked lists, etc. Introduction to other data structures: graphs, B-trees, etc.

SE 504. *Formal Methods and Models*

3

(Prerequisite, SE 501) This course addresses issues concerning the production (and life) of quality software throughout the software life cycle. Limitations of *verification* and *validation*. Quality assurance. Proof of correctness methods. Technical reviews. Testing.

SE 507. *Requirements Analysis and Software Specification*

3

(Prerequisite, SE 500) Exploration of two inter-related subjects of software life cycle process; requirements and their specifications. Topics: Requirements analysis techniques, Interview process, prototypes, types of requirements (functional, non-functional, reliability, quality, security, etc.), traceability, languages of specification (Axiomatic, algebraic, finite state machine, abstract, operational, concurrency).

SE 510. *Principles and Applications of Software Design*

3

(Prerequisite, SE 507) The design of large software systems is an important activity of the software engineer. Topics include: abstraction, information hiding, modularity. Object design methods, data abstraction methods, interactive enhancement, data flow, program design languages. Design verification, user interfaces, distributed systems, real-time systems, etc.

SE 515. *Software Generation and Maintenance*

3

(Prerequisite, SE 501) Maintenance accounts for about 70% of the software system life cycle. Designing new *maintainable* software systems is as important as dealing with existing *non-maintainable* ones. Topics include: writing reusable software components, automatic code and application generators and their limitations, regression analysis, reverse engineering, etc.

SE 516. *Engineering of Software Systems*

3

There is a parallel between hardware system engineering and software systems engineering. Several issues are relevant to both and in many cases they interact with each other. Topics include: system specification and design, interfaces with hardware and software systems, human interfaces, system integration, documentation, training, overall requirements, and requirements gathering.



SE 521. *Database Systems*

3

(Prerequisite, SE 507) A study of database systems and their design and implementation. Topics include: security, query analysis and optimization, database systems requirements analysis, specification and implementation, etc.

SE 522. *Cost Collection and Analysis Metrics*

3

(Prerequisite, SE 510) This course explores the concepts and theories of cost estimation and how they relate to all aspects of the software life cycle. What to measure and why. Where to measure and how. Relationship to risk analysis, project management, etc.

SE 524. *Software Project Management*

3

(Prerequisite, SE 510) Software system development. Project development. Budget and human factors. Relationship between quality assurance, communication management and project documentation. Ethical and security issues.

SE 532. *Real-time and Embedded Systems*

3

(Prerequisites, SE 507 & 510) Real-time and embedded software systems development present a whole different set of variables to the software engineer. This course focuses on a number of design, development and maintenance techniques for this type of system. Topics include data acquisition and generation, system design strategies, testing constraints, verification, etc.

SE 533. *CASE Tools*

3

(Prerequisite, SE 524) Study and use of several CASE tools. CASE tools integration, choosing the tools for a particular environment.

SE 598, SE 599. *Thesis Project I and II*

Each 3

(Prerequisite, having passed all required courses) A two semester sequence in which students are expected to undertake a software project which requires the use of tools, techniques and theory learned from previous courses. It will be strongly recommended that thesis projects be developed in teams.



*Rev. J.A. Panuska, S.J.,
President of the University of Scranton*



*Dr. Richard Passon,
Provost and Academic Vice President.*

Faculty Directory

Officers of the University Corporation

The Rev. J.A. Panuska, S.J., President

Marilyn Coar, Secretary

David E. Christiansen, Treasurer

Officers of Administration

The Rev. J.A. Panuska, S.J. (1982)
President of the University (1982)
Professor, Biology (1982)
B.S., Loyola College;
S.T.L., Woodstock College;
Ph.L., Ph.D., St. Louis University

Richard H. Passon (1984)
Provost/Academic Vice President (1984)
Professor, English (1984)
A.B., King's College;
M.A., Ph.D., University of Notre Dame

Shirley M. Adams (1986)
Dean, Dexter Hanley College (1986)
Assistant Professor, Education (1986)
B.A., University of Northern Iowa;
M.A., University of Iowa;
Ph.D., Iowa State University

James T. Bryan (1988)
Vice President for Student Affairs (1988)
B.S., State University of New York at
Fredonia;
M.A., Michigan State University
Ed.D., Columbia University

David E. Christiansen (1987)
Vice President for Finance/Treasurer (1987)
B.S., M.B.A., LaSalle University

Jerome DeSanto (1979)
Executive Director of Technology Center
(1988)
B.S., M.B.A., University of Scranton

Paul F. Fahey, Jr., D. et U. * (1968)
Dean, College of Arts and Sciences (1990)
Professor, Physics/Electronics
Engineering (1978)
B.S., University of Scranton;
M.S., Ph.D., University of Virginia

John S. Flanagan (1974)
Vice President for Administrative Services
(1983)
Lecturer, Management/Marketing (1974)
B.A., College of William and Mary;
M.S., University of Alabama

Joseph A. Fusaro (1974)
Acting Dean, College of Health, Education,
and Human Resources (1990)
Chair, Department of Education (1990)
Professor, Education (1983)
B.A., Rider College;
M.Ed., University of Vermont;
Ed.D., State University of New York at
Albany

Thomas P. Hogan (1985)
Dean, Graduate School (1985)
Professor, Psychology (1985)
B.A., John Carroll University;
M.A., Ph.D., Fordham University

Joseph Horton (1986)
Dean, School of Management (1986)
Professor, Economics/Finance (1986)
B.A., New Mexico State University;
M.A., Ph.D., Southern Methodist University

Martin L. Langan (1974)
Assistant Vice President for Operations
(1988)
B.S., M.B.A., University of Scranton

Thomas D. Masterson, S.J. (1976)
Director of Campus Ministries (1976)
and University Chaplain (1989)
Assistant Professor, History/Political Science
(1976)
A.B., M.A., Fordham University;
Ph.L., S.T.B., S.T.L., Woodstock College;
M.A., Ph.D., Georgetown University

Bernard R. McIlhenny, S.J. (1958)
Dean of Admissions (1981)
A.B., M.A., Loyola University, Chicago;
S.T.B., Woodstock College

Glenn Pellino (1980)
Vice President for Planning and
Administration (1986)
B.A., M.A., St. Louis University
Ph.D. Cand., University of Michigan

John Stalker (1989)
Director of Library (1989)
B.A., Canisius College;
M.A., M.S.L.S., Ph.D., University of North
Carolina at Chapel Hill

Robert J. Sylvester (1983)
Vice President for Development (1983)
B.S., University of Scranton
M.A., Fairfield University

Lee Williames (1987)
Assistant Provost/Assistant Academic Vice
President (1987)
Professor, History/Political Science (1987)
B.A., LaSalle University;
M.A., Niagara University;
A.C.S., Soviet Institute, Niagara University;
Ph.D., State University of New York at
Binghamton

University of Scranton The Graduate Faculty

- George V. Babcock, Jr., D. Et U. * (1963)
Associate Dean, School of Management
(1985)
Associate Professor, Economics/Finance
(1974)
A.B., M.A., Ph.L., Boston College;
M.B.A., New York University
- Stephen S. Batory (1989)
Associate Professor, Management/Marketing
(1989)
B.S., King's College;
M.B.A., Old Dominion University;
D.B.A., University of Maryland
- Christopher Baumann (1984)
Associate Professor, Chemistry (1989)
B.S., Oregon State University;
Ph.D., University of Florida
- Rebecca S. Beal (1983)
Associate Professor, English (1983)
A.B., Westmont College;
M.A., University of Chicago;
Ph.D., University of Texas
- John A. Beidler, C.D.P., D. et U. * (1964)
Professor, Computing Sciences (1976)
Chair, Department of Computing Sciences
(1980)
A.B., King's College;
M.A., Lehigh University;
Ph.D., Pennsylvania State University
- Gerald Biberman (1981)
Associate Professor,
Management/Marketing (1987)
B.A., M.A., Ph.D., Temple University
- Mrigen Bose, D. et U. * (1968)
Associate Professor, Economics/Finance
(1977)
B.S., Patna University;
M.A., M.A., University of Calcutta;
M.S., University of Kentucky;
Ph.D., University of Utah
- Charles J. Buckley, D. Et U. * (1947)
Dean Emeritus, Dexter Hanley College
(1984)
Assistant to the Academic Vice President
(1984)
Associate Professor, Accounting (1968)
B.S., University of Scranton;
M.B.A., New York University
- Michael C. Cann (1975)
Professor, Chemistry (1988)
B.A., Marist College;
M.A., Ph.D., State University of New York at
Stony Brook
- Joseph M. Cannon, D. Et U. * (1959)
Professor, Education (1974)
B.S., University of Scranton;
M.Ed., Doctoral Studies, Pennsylvania State
University; Licensed Psychologist
- Brian W. Carpenter, C.M.A. (1987)
Assistant Professor, Accounting (1987)
B.S., Pennsylvania State University;
M.B.A., University of Scranton;
Ph.D., Pennsylvania State University
- Ellen M. Casey, D. et U. * (1969)
Professor, English (1981)
B.S., Loyola of Chicago;
M.A., University of Iowa;
Ph.D., University of Wisconsin
- Raymond W. Champagne, Jr., D. et U. * (1967)
Professor, History/Political Science (1981)
A.B., Providence College;
M.S., Duke University;
Ph.D., Loyola University, Chicago
- Jafor Chowdhury (1987)
Assistant Professor, Management/
Marketing (1987)
B. Com., M.Com., Dacca University;
M.B.A., Dalhousie University;
Ph.D., Temple University
- Thomas M. Collins (1989)
Instructor, Human Resources (1989)
B.S., Kutztown University;
M.L.S., Rutgers University;
Ed.M., Temple University;
Ph.D. Cand., State University of New York at
Albany
- Willis M. Conover (1978)
Associate Professor, History/
Political Science (1986)
B.A., B.S., Pennsylvania State
University;
M.S., Ed.D., Montana State University
- Frank P. Corcione (1978-79; 1982)
Associate Professor, Economics/Finance
(1982)
B.A., Moravian College;
M.A., Ph.D., Lehigh University
- James J. Cunningham, D. et U. * (1968)
Associate Professor, Human Resources
(1971)
A.B., King's College;
Ed.M., Ed.D., Rutgers University;
Licensed Psychologist
- Wayne H.J. Cunningham (1987)
Associate Professor, Quantitative
Management Systems (1987)
B.S., M.B.A., Ph.D., Pennsylvania State
University
- Frank H. Curtis, D. et U. * (1966)
Associate Professor, Education (1980)
B.S., M.Ed., Doctoral Studies,
Pennsylvania State University

- Thomas W. Decker (1977)
Associate Professor, Human Resources (1982)
B.A., Dickinson College;
M.Ed., University of Virginia;
Ph.D., Ohio State University;
Licensed Psychologist
Certified Rehabilitation Counselor;
National Certified Counselor
- Michael D. DeMichele, D. et U. * (1967)
Professor, History/Political Science (1974)
Chair, Department of History/Political Science (1976)
B.S., University of Scranton;
M.A., Ph.D., Pennsylvania State University
- Trudy Dickneider (1984)
Associate Professor, Chemistry (1989)
B.A., M.A., St. Joseph's College;
Ph.D., University of Miami
- Joseph C. Dougherty, D. et U. * (1967)
Professor, History/Political Science (1967)
B.A., St. Charles College;
M.A., Ph.D., Georgetown University
- Joseph H. Dreisbach (1978)
Professor, Chemistry (1989)
B.S., LaSalle College;
M.S., Ph.D., Lehigh University
- John L. Earl, III, D. et U. * (1964)
Professor, History/Political Science (1972)
B.S., M.A., Villanova University;
Ph.D., Georgetown University
- Mary F. Engel (1986)
Associate Dean, College of Arts and Sciences (1986)
Director, Academic Advising Center (1987)
Associate Professor, English (1986)
B.A., St. Bonaventure University;
L.L., Katholieke Universiteit te Leuven;
Ph.D., Kent State University
- LeeAnn Eschbach (1986)
Assistant Professor, Human Resources (1990)
B.S., M.S., Ph.D., Washington State University
- John Q. Feller, D. et U. * (1969)
Professor, History/Political Science (1976)
A.B., Loyola College;
M.A., Ph.D., The Catholic University of America
- William A. Gabello, C.P.A. (1983)
Assistant Professor, Accounting (1990)
B.S., University of Scranton
- Thomas W. Gerrity (1976)
Associate Professor, Education (1986)
B.S., University of Pennsylvania;
M.S., University of Scranton;
Ed.D., Columbia University
- Satyajit Ghosh (1986)
Assistant Professor, Economics/Finance (1986)
B.A., M.A., Presidency College, University of Calcutta;
Ph.D., State University of New York at Buffalo
- A. John Giunta, D. et U. * (1960)
Professor, Economics/Finance (1967)
B.S., Harpur College;
M.S., Ph.D., Syracuse University
- Kingsley S. Gnanendran (1989)
Assistant Professor, Quantitative Management Systems (1989)
B.S.C., University of Sri Lanka;
M.Eng., Asian Institute of Technology;
Ph.D., University of Tennessee
- Irene Goll (1988)
Assistant Professor, Management/Marketing (1988)
B.S., Pennsylvania State University;
M.A., University of Illinois;
Ph.D., Temple University
- Leonard G. Gougeon (1974)
Professor, English (1982)
B.A., St. Mary's University, Halifax;
M.A., Ph.D., University of Massachusetts
- Ralph W. Grambo (1973)
Associate Professor, Economics/Finance (1978)
Chair, Department of Economics/Finance (1990)
B.S., University of Scranton;
M.B.A., Ph.D., University of Pennsylvania
- Ronald J. Grambo, C.P.A. (1976-77; 1980)
Associate Professor, Accounting (1988)
Chair, Department of Accounting (1987)
B.A., M.B.A., University of Scranton;
Ph.D., Pennsylvania State University
- David W. Hall (1985)
Assistant Professor, Human Resources (1987)
A.B., Lycoming College;
M.S., University of Scranton;
Ph.D., Pennsylvania State University;
Licensed Psychologist;
Certified Rehabilitation Counselor;
National Certified Counselor
- Joseph A. Hammond, C.P.A. (1983)
Instructor, Accounting (1983)
B.S., Lehigh University;
M.B.A., University of Scranton;
Ph.D. Cand., Syracuse University
- Claudia S. Harris (1988)
Associate Professor, Management/Marketing (1990)
B.S., Eastern Kentucky University;
M.B.A., Ph.D., University of Utah
- Jean Wahl Harris (1987)
Assistant Professor, History/Political Science (1988)
B.A., M.A., Ph.D., State University of New York at Binghamton
- Maurice I. Hart, Jr., D. et U. * (1963)
Professor, Chemistry (1971)
Chair, Department of Chemistry (1985)
A.B., Maryknoll College;
M.S., Ph.D., Fordham University

- Eileen B. Hewitt (1982)
 Assistant Professor, Management/
 Marketing (1988)
 Chair, Department of Management/
 Marketing (1987)
 B.S., St. Joseph's College, Maine;
 M.S., University of Hartford
- John M. Hill (1981)
 Associate Professor, English (1987)
 B.A., Central College;
 M.A., University of Illinois;
 M.F.A., University of Iowa;
 Ph.D.Cand., University of Illinois
- William Hill, S.J., D. et U. * (1946-47; 1969)
 Special Assistant to the President (1987)
 Professor, English (1969)
 A.B., Georgetown University;
 Ph.L., Woodstock College;
 S.T.L., Weston College;
 M.A., Ph.D., Fordham University
- Frank X.J. Homer, D. et U. * (1968)
 Professor, History/Political
 Science (1984)
 A.B., University of Scranton;
 M.S., Ph.D., University of Virginia
- Robert F. Huston, D. et U. * (1968)
 Associate Professor, History/Political
 Science (1976)
 A.B., College of Holy Cross;
 M.A., Ph.D., University of Notre Dame
- Riaz Hussain, D. et U. * (1967)
 Associate Professor, Economics/Finance
 (1985)
 B.S., Forman College;
 M.S., University of Panjab;
 Ph.D., Johns Hopkins University
- Paul M. Jackowitz, C.D.P., C.C.P. (1977-80;
 1982)
 Assistant Professor, Computing Sciences
 (1982)
 B.S., University of Scranton;
 M.S., Rensselaer Polytechnic Institute
- Linda Jacob (1987)
 Assistant Professor, Chemistry (1987)
 B.A., M.A., Vassar College;
 Ph.D., New York University
- Bernard J. Johns, D. et U. * (1961)
 Associate Professor, Mathematics (1979)
 A.B., Wilkes College;
 M.A., Bucknell University;
 Doctoral Studies, University of Illinois
- Francis X. Jordan, D. et U. * (1966)
 Associate Professor, English (1976)
 Chair, Department of English (1987)
 A.B., M.A., University of Scranton;
 Ph.D., St. Louis University
- Prasad Rao V. Kakumanu (1978)
 Professor, Quantitative Management
 Systems (1984)
 Chair, Department of Quantitative
 Management Systems (1987)
 B.S., Andhra University;
 M.S., Patna University;
 M.A., Delhi University;
 Ph.D., Cornell University
- Raymond L. Kimble (1973)
 Associate Professor, Education (1973)
 B.S., Mansfield State College;
 M.S., State University of New York at
 Cortland;
 Ed.D., Arizona State University
- Barbara Samuel Loftus (1986)
 Assistant Professor, Management/
 Marketing (1987)
 B.S., Susquehanna University;
 M.B.A., University of Scranton;
 Ph.D. Cand., Syracuse University
- Maggie A. Lund (1989)
 Instructor, Human Resources (1989)
 B.S., M.S., M.S., University of Scranton
- Michael Marino, D. et U. * (1965)
 Professor, Education (1970)
 B.S., M.S., Brockport State College;
 Ed.D., University of Buffalo
- Dennis S. Martin (1985)
 Associate Professor, Computing
 Sciences (1985)
 B.S., Manhattan College;
 M.A., University of Rochester;
 M.S., Ed.D., State University of
 New York at Buffalo
- David E. Marx (1987)
 Assistant Professor, Chemistry (1988)
 B.S., East Stroudsburg University;
 Ph.D., State University of New York at
 Binghamton
- Eugene A. McGinnis, D. et U. * (1948)
 Professor, Physics/Electronics
 Engineering (1963)
 B.S., University of Scranton;
 M.S., New York University;
 Ph.D., Fordham University
- John M. McInerney, D. et U. * (1966)
 Professor, English (1977)
 A.B., LeMoine College;
 M.A., Ph.D., Loyola University, Chicago
- Michael O. Mensah (1987)
 Assistant Professor, Accounting (1987)
 B.S., University of Ghana;
 M.B.A., Northeast Louisiana University;
 Ph.D., University of Houston
- Oliver J. Morgan, S.J. (1990)
 Assistant Professor, Human Resources
 (1990)
 B.A., Fordham University;
 M.F.T., Hahnemann Medical University;
 Ph.D. Cand., Boston University

- Jay Nathan, C.F.P.I.M. (1983)
Associate Professor, Quantitative
Management Systems (1983)
B.S., M.S., University of Madras;
M.E., University of Florida;
M.B.A., M.A., Ph.D., University of
Cincinnati
- J. Fernando Naveda (1988)
Assistant Professor, Computing
Sciences (1988)
B.S.D., Institute Technologica de
Monterrey;
Ph.D., University of Minnesota
- Hong V. Nguyen (1979)
Associate Professor, Economics/Finance
(1985)
B.S., State University of New York
at Brockport;
M.S., Ph.D., State University
of New York at Binghamton
- Alice L. O'Neill (1989)
Instructor, Human Resources (1989)
R.N., State University of New York
at Endicott;
B.S., St. Joseph's College;
M.S., University of Scranton
- William J. Parente, D. et U. * (1970)
Professor, History/Political Science (1973)
A.B., Xavier University;
Ph.D., Georgetown University
- Richard Plishka (1986)
Associate Professor, Computing
Sciences (1989)
B.S., University of Scranton;
M.S., M.B.A., Syracuse University
- Rose S. Prave (1988)
Assistant Professor, Quantitative
Management Systems (1988)
B.S., Indiana University of Pennsylvania;
Ph.D., Pennsylvania State University
- John J. Quinn, S.J., D. et U. * (1956)
Professor, English (1968, 1975)
A.B., Holy Cross College;
M.A., Fordham University;
S.T.B., Woodstock College;
Ph.L., Weston College;
Ph.D., University of London
- Joseph L. Quinn, S.J. (1979)
Assistant Professor, English (1979)
A.B., Ph.L., A.M., Fordham University;
S.T.B., Woodstock College;
A.M., Ph.D., Harvard University
- Murli Rajan (1989)
Assistant Professor, Economics/Finance
(1989)
B.C.A., Victoria University;
M.Com., Delhi School of Economics,
University of Delhi;
M.B.A., University of Scranton;
Ph.D. Cand., Temple University
- William W. Rakauskas, D. Et U. * (1969)
Professor, English (1979)
B.S., M.A., University of Scranton;
Ed.D., Temple University
- J.W. Roberts (1986)
Assistant Professor, English (1987)
B.A., M.A., University of Arkansas;
Ph.D., Kent State University
- Carl Schaffer (1988)
Assistant Professor, English (1988)
B.A., Fairleigh Dickinson University;
M.A., University of Michigan;
M.F.A., University of Iowa;
Ph.D., Cand., University of Denver
- Larry R. Sherman (1981)
Assistant Professor, Chemistry (1981)
B.S., Lafayette College;
M.S., Utah State University;
Ph.D., University of Wyoming
- James R. Sidbury (1983)
Associate Professor, Computing
Sciences (1983)
B.S., Duke University;
M.S., Ph.D., Auburn University
- John C. Stevens (1987)
Assistant Professor, Computing
Sciences (1987)
B.A., Reed College;
A.M., Ph.D., University of Chicago;
M.S., Lehigh University
- John K. Stout, D. et U. * (1966)
Professor, Human Resources (1985)
Chair, Department of Human Resources
(1989)
B.S., M.S., D.Ed., Pennsylvania State
University;
Licensed Psychologist
- Charles E. Taylor, C.D.P. (1974)
Associate Professor, Computing
Sciences (1983)
B.S., M.B.A., West Virginia University
- Len Tischler (1990)
Assistant Professor, Management/Marketing
(1990)
B.A., Wabash College;
M.B.A., Ph.D., University of Maryland
- Susan Trussler (1985)
Assistant Professor, Economics/Finance
(1987)
B.Sc., London School of Economics;
M.S., Ph.D., Pennsylvania State University;
A.P.C., New York University
- Joe A. Vinson (1974)
Professor, Chemistry (1990)
B.S., University of California, Berkeley;
M.S., Ph.D., Iowa State University
- Joan M. Wasilewski (1988)
Assistant Professor, Chemistry (1988)
B.S., King's College;
Ph.D., University of Pennsylvania

Daniel J. West (1990)
Assistant Professor, Human Resources
(1990)
B.S., M.Ed., Ph.D., Pennsylvania State
University

Stephen E. Whittaker (1983)
Associate Professor, English (1988)
B.A., M.A., Ph.D., University of Texas

David A. Wiley (1988)
Assistant Professor, Education (1988)
B.S., M.S., Ph.D., Temple University

Bernard D. Williams, D. et U. * (1962)
Professor, History/Political Science (1976)
B.S., LaSalle College;
M.A., Niagara University

Joseph R. Zandarski, D. et U. * (1951)
Professor, Accounting (1971)
B.S., University of Scranton;
M.B.A., New York University;
Ph.D., University of Pittsburgh

* Pro Deo et Universitate Award for 20 years of
service.

Adjunct Faculty

Deborah Baker
B.S., State University of New York at
Genesco;
M.S., M.S., University of Scranton

Alfred Bartol
B.S., Lock Haven University;
M.S., Drexel University

Charles G. Blewitt
B.S., University of Scranton;
M.S., University of Pennsylvania;
Ed.D., West Virginia University

Lori Bruch
B.S., M.Ed., Pennsylvania State University;
M.S., University of Wisconsin-Stout

Kevin Creggan
B.S., M.S., University of Scranton;
Ph.D., State University of New York at
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Matthew C. Farrell, D. et U. * (1967)
Professor Emeritus, Education (1976)
B.A., M.S., University of Scranton;
Ph.D., Fordham University

Margaret Glaser
B.A., Pennsylvania State University;
M.Ed., Ph.D., Temple University

Joseph M. Krella
B.S., University of Scranton;
M.P.A., Marywood College

Michael Margeotes
B.S., Rutgers University;
M.B.A., University of Scranton

Roger W. Moscatel
B.A., M.B.A., St. John's University

Peter Newhouse
B.S., M.S., University of Wisconsin

Thomas Pregent
B.S., North Adams State College;
M.A., American International College

Adrian Samojlowicz
B.S., Temple University;
M.B.A., Xavier University

David Tressler
B.S., Pennsylvania State University;
M.S., University of Pittsburgh

Edward Tschopp
B.S., Marywood College;
M.B.A., University of Scranton

BRIEF TELEPHONE DIRECTORY

(717) 941-

The Graduate School 7600

Academic Departments:

Business 4208

Chemistry 6286

Computing Sciences 7774

Education 7421

English 7619

History 7625

Human Resources 7633

Other:

General University Information 7400

Bookstore 7763

Byron Recreation Center 6203

Career Services 7640

Counseling Center 7620

Financial Aid 7700

Library 7525

Security 7777

Student Health Services 7667

Treasurer 4062

University Computing Systems 7460

NOTES

Legend for Map

DIRECTORY

FACILITIES

- | | | |
|---------------------|-------------------------|--------------------------------------|
| 1 Fitzpatrick Field | 12 St. Thomas Hall | 20 Byron Recreation Complex |
| 2 Jefferson Hall | - McDade | 21 Campion Hall |
| 3 O'Hara Hall | Technology Center | 22 Elm Park Annex |
| 4 The Gallery | 13 Galvin Terrace | 23 Houlihan-McLean Center |
| 5 Rock Hall | 14 Gunster Center | 24 Smurfit Art Center |
| 6 Alumni House | 15 John J. Long Center | 25 Center, Eastern Christian Studies |
| 7 Greenhouse | 16 Maintenance Building | 26 Hyland Hall |
| 8 Scranton Hall | 17 Hill House | 27 CRC, Lake Chapman |
| 9 The Estate | 18 Claver Hall | 28 Poly-Hi Park |
| 10 Memorial Library | 19 New Library | |
| 11 Loyola Hall | (under construction) | |

RESIDENCES

- | | |
|----------------------|-----------------------|
| 30 Redington Hall | 46 Gonzaga House |
| 31 Martin Hall | 47 Blair House |
| 32 Casey Hall | 48 Westmoreland House |
| 33 Lynett Hall | 49 Fayette House |
| 34 Hannan Hall | 50 Tioga House |
| 35 Fitch Hall | 51 Liva House |
| 36 Denis Edward Hall | 52 Cambria House |
| 37 Haley Hall | 53 Montgomery House |
| 38 McCourt Hall | 54 Mercer House |
| 39 Nevils Hall | 55 Wayne House |
| 40 Driscoll Hall | 56 Monroe House |
| 41 Gavigan Hall | 57 Wyoming House |
| 42 Luzerne House | 58 Bradford House |
| 43 Hopkins House | 59 Somerset House |
| 44 Kostka House | 60 Jerrett House |
| 45 New Hall | 61 Jefferson Hall |
| (under construction) | |

PARKING

- A Visitors
- B Library - Student Parking
- C St. Thomas - Staff
- D St. Thomas - Staff
- E Catlin Court - Staff
- F Long Center (rear) - Staff
- G Redington Hall - Students
- H Poly-Hi Park - Students
- I Student Center - Students
- J Monroe Avenue - Students
- K O'Hara Hall - Staff
- L Jefferson Hall - Students
- M Arts Center - Students
- P Rock Hall - Students
- Q Madison Avenue - Students
- R Claver Hall- Staff/Students
- S Jefferson Avenue - Staff



UNIVERSITY OF SCRANTON

800 Linden Street
Scranton, PA 18510-4632

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